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ORIGINAL ARTICLES.

TRANSFUSION.*

BY WALTER B. DORSETT, M. D., St. Louis.

By way of explanation of the title of this paper, I will say that the subject-matter I here present will deal with the introduction of normal saline solution alone directly into the venous channels or into the cellular tissue, by enema, and the partial filling of the abdominal cavity with the saline solution after abdominal section; in contradistinction to the injection of blood from one person into the veins of another, as was practiced many years ago. A more comprehensive title would be, "The Introduction of Fluids Into the Circulation."

It is claimed that the first method of treatment of shock was by the transfusion of blood from a healthy individual into the veins of another suffering or dying from the loss of blood. Later the transfusion or introduction of sheep's blood into the venous circulation of the human species.

Transfusion was not only much used during the past three centuries, but the practice was so abused in the treatment of disease and so vaunted as a means of prolonging the life of the aged, that in the early part of the Eighteenth century the French government passed laws prohibiting it and assessing severe penalties on those intercepted in its practice.

So far I have used in transfusion the normal saline solution alone, and as adjuvants, in a few instances, hypodermic injections of camphorated oil, strychnia and adrenalin.

J. P. L. Mummery, in the *London Lancet*, April 1st, 1905, says: "With the experimental data now at hand and by observations made with the sphygmometer I think it possible to arrive at definite, satisfactory results by use of artificial serum which may be enhanced by the addition of certain drugs; adrenalin, and ergot," and sums up his article as follows:

"*Surgical shock* is a condition produced by exhaustion of the vasomotor centers and the resulting great fall in blood pressure.

"*Collapse* is a similar condition caused by lowering of the blood pressure from hemorrhage or paralysis of the vasomotor centers."

*Read before the St. Louis Surgical Society, November 15, 1905.

In another paper he says: "Of the most effectual methods of treating shock is the administration of such drugs as adrenalin, hemisine and ergot in conjunction with artificial serum. Adrenalin if used in strong solution will cause spasm of the heart by contraction of the heart muscle."

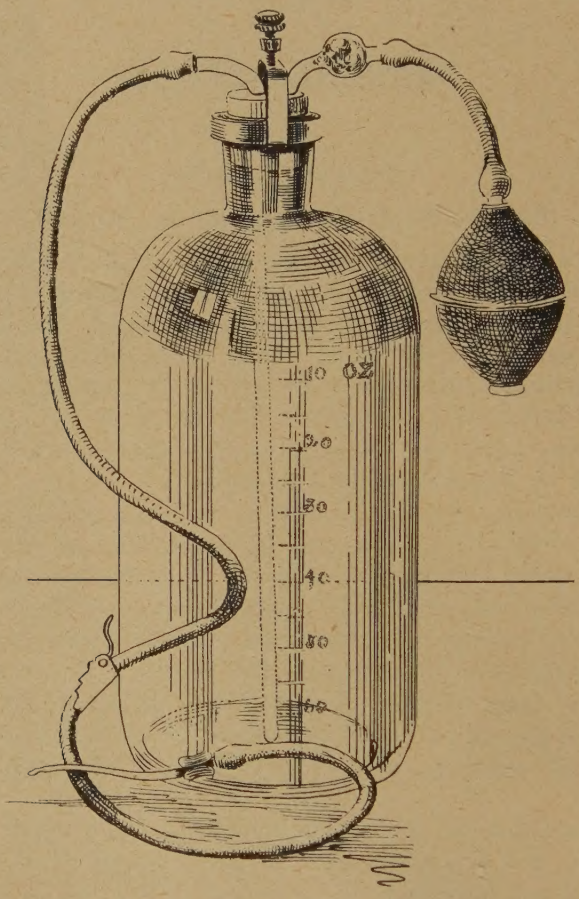


FIG. 1.—Transfusion apparatus.

Janeway records a case where 20 minims of 1-1000 was injected intravenously with the result that after an interval of five minutes the blood pressure rose to a great height, reaching 230 mm. of mercury in the course of the next three minutes. This was followed by a rapid fall in the pulse, there was a collapse accompanied by delirium and vomiting and recovery was not complete for some hours. Von Fuerth points out that apoplexy might follow its use in people predisposed.

The most serious objection to adrenalin is the short duration of its effect, but it might be contended in its favor that after its first action is

over, the artificial serum will continue the effects, and it is the immediate effect which we want, as the marked physiology of shock teaches us the great fall in blood pressure is due to lack of peripheral resistance due to general vasomotor dilatation.

The action of suprarenal extract in the raising of blood pressure was first demonstrated by Oliver and Schaffer in experiments on animals. In the *Journal of the American Medical Association,* January 24th, 1904, G. W. Crile proved most conclusively that the action of adrenalin was due to a direct contraction of the blood vessels and heart muscle. This was done by severing the spinal cord of a dog and keeping him alive with adrenalin, saline solution and artificial respiration. He also states that an artificial serum with adrenalin added and poured into the abdominal cavity before it is closed, will hasten recovery from shock. Craig reports two cases of surgical shock treated by saline infusion with addition of adrenalin, both cases of accident with severe shock, and both recovered.

In "Problems Relating to Surgical Operation" (Crile), published by J. B. Lippincott, 1901, we find: The treatment varies when the patient is suffering from shock (due to exhaustion of the vasomotor centers) and collapse, which must be considered as a temporary suspension of function of the cardiac or vasmotor mechanism, or due to hemorrhage. Salt infusion has only a limited field in shock, while it always is extremely effective in collapse, especially that form due to hemorrhage. In shock we need some therapeutic means to act as a constriction on the peripheral vessels. According to Crile, adrenalin added to the salt solution given intravenously, does this. As yet only a few cases have been reported, all favorably.

Dr. F. Le Jars, Surgeon to the Paris Hospital, in an article entitled, "The Treatment of Patients Who Seem Deplorably Ill in Consequence of Accident, Hemorrhage or Infection," says: "The mechanism of death from hemorrhage is not a single one as there is not only a functional death due to extreme loss of corpuscles but a mechanical death due to the extreme depression of the vascular tonus, a collapse of the vessels through emptiness, so that they can no longer react usefully on their contents." He continues to say that it is nonsense to give 200 to 300 cc. of the artificial serum and consider that all that is necessary has been done. In extreme cases of acute anemia the too empty vessels must be filled at once and intravenous injection is exactly suited to that emergency. Even when the hemorrhage has been so severe that the functions of life seem to have ceased, the injection of the serum may prolong life for three or four hours, a result not to be disdained, as a small percentage of those cases may recover."

It is my purpose to give here my own experience rather than to burden you with extended quotations or abstracts from the scant literature of today.

The chief question in a given case always is: What is the departure from the normal physiological condition that may or may not demand transfusion? Is it surgical shock as defined by Mummery "a condition produced by exhaustion of the vasomotor centers and the resulting great fall of blood pressure?" Is it a similar condition, called collapse, brought about by the lowering of the blood pressure from hemorrhage? So far as I have been able to reason, these definitions are so alike in their meaning that it is hardly worth the while to discuss the difference, for after all they both demand stimulation of the nerve centers.

So, also, in cases of toxemia, of any character, having as their etiology defective kidney excretion, or those due to toxic elements otherwise introduced into the current of the blood. The case demands stimulation of the nerve centers so that the emunctories may be stimulated to perform their functions.

Now, the physiological or normal saline solution is the remedy, for not alone does it stimulate the glandular system through the nerve centers, to renewed action, but in toxic conditions it dilutes the toxic blood so that its effects are less disastrous. It acts locally as well as in a general way. In conditions of loss of blood it also supplies the loss so that the heart performs its function with more uniformity and force, as is evidenced by the change from a weak and rapid pulse to one more uniform and of greater volume.

As a prophylactic agent I have used it in preparing patients for the ordeal of surgical operations, almost in fact in a routine way. I here quote from my own article entitled, "Preparation of Patient for Abdominal Section and Treatment of the Case," as it apeared in the St. Louis *Medical Review,* January 23rd, 1904. "From observation of my own cases and others I am inclined to believe that in our zeal to get the intestinal tract free from fecal matter, hyper-catharsis is obtained to the great detriment of the patient's strength. Particularly is this due to the use of epsom salts in large doses. This applies particularly to cases in which quite an amount of blood may be lost, as in hysterectomies, myomectomies or salpingotomies." In order that we may be forearmed, "on the morning of the operation, one, two or three hours prior thereto, a copious soap-suds enema is given for the purpose of the removal of the remaining fecal matter, so that should it be desired to give a copious saline enema in case of shock from great loss of blood or otherwise, you have a better absorbing surface in the colon." In this same article I called attention to the efficiency of large quantities of water taken by the mouth for the purpose of preventing prolonged anesthetic emesis. It not only does this but it also tends to refill vessels that have been robbed of their fluid element by the previous catharsis.

Since the above was written it has been my practice, after prolonged intra-abdominal operations, whether much or little blood has been lost,

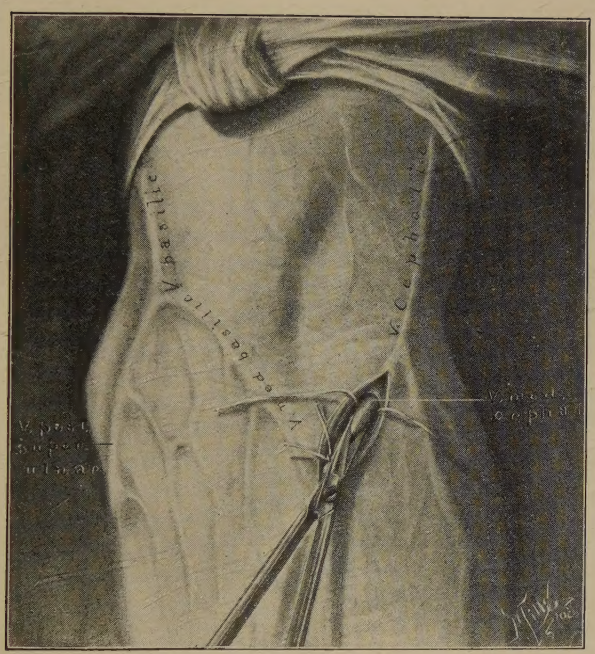


FIG. 2.—Mode of snipping vein to admit nozzle of transfusing tube.

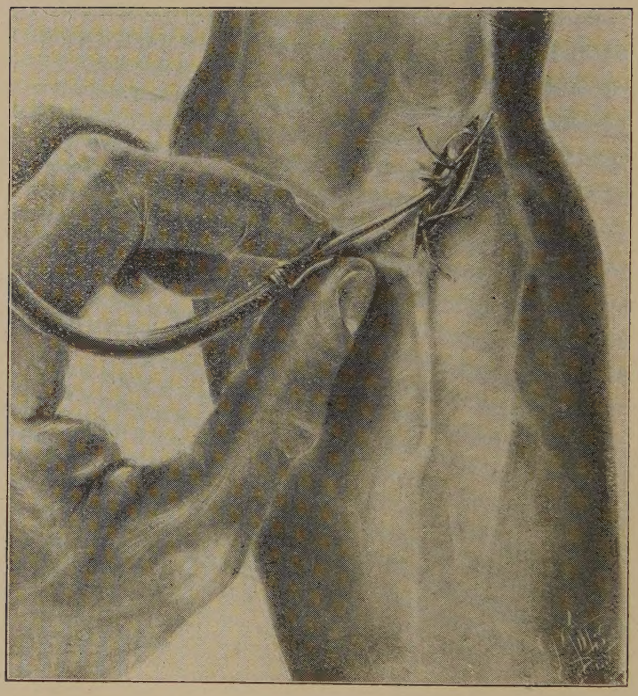


FIG. 3.—Nozzle tied in vein.

to inject into the rectum from one to two pints of normal saline solution. The indication for this procedure has most frequently been a weak and rapid pulse and not alone the quantity of blood lost.

In puerperal eclampsia, which after all is simply a symptom of profound toxemia, there is no better remedy, to my mind, than the introduction of normal saline solution into the vein. I would by no means lessen the importance of injecting into the cellular tissue beneath the mammary glands or elsewhere, but, for the reason that we want quick and definite action, I prefer the intravenous injection. In these cases it is best always to open a vein for the purpose of lessening the quantity of the toxic blood in the circulation and then supplying the quantity taken, by normal saline solution which, as has been stated before, dilutes the toxines and renders them less potent while it stimulates glandular excretion.

In order to illustrate its action I here relate a case. I was called by Dr. W. G. Moore, to transfuse a lady suffering with puerperal eclampsia; pulse about 150 and very weak; bladder had been catheterized a few minutes before my arrival with the result that no urine was found, indicating suppression of urine. I opened the median basilic vein and withdrew ten or twelve ounces of blood, and while I still had the vein open I injected about thirty ounces of normal saline solution, with the result in fifteen minutes, of a pulse of 100 and a bladder from which I withdrew with the catheter sixteen ounces of urine. While this patient died the following day, I am satisfied the normal saline injection was indicated. In this case adrenalin was not used.

Not having kept my notes as I should have done, I am unable to state definitely how often I have used intravenous transfusion, but from memory and from some notes I will mention a few cases. Mrs. W. H. P., a case of double pus tube in which there was a profound septicemia. The vaginal route was chosen in this case on account of the septic condition of the uterus as well as the tubes. The patient lost but little blood but within twenty minutes after being put to bed, had a weak and very rapid pulse and shallow breathing. Transfused two pints of normal saline solution. Patient had pulse of 160; recovery.

Mrs. A. A., extra-uterine pregnancy with severe intra-abdominal hemorrhage. Operated March 18, 1901. Two days later, temperature 99, pulse 150. Air hunger to marked degree, dimness of vision, patient thought to be dying. Intravenous transfusion of three pints of normal saline solution. One-half hour afterwards pulse 102, respiration twenty-four. Two days later pulse again weak and 160 per minute, jerky respiration, patient said she knew she was dying. Transfused two and a half pints normal saline solution. Patient recovered.

Mrs. R., age 56; abdominal hysterectomy for large fibroid that had undergone degenerative changes. Patient did well till third day after

operation, when pulse suddenly became weak and very rapid. Transfused three pints. Patient quickly became delirious and suddenly died and, I fear, of rupture of cerebral artery. In this case there was a perceptible arterio-sclerosis of radial artery. Did not succeed in getting an autopsy.

Mrs. F. S.; extra-uterine pregnancy; opened through the vagina; hemorrhage terrific. Intravenous transfusion done by Drs. Howard and Nevill while I abandoned the vaginal route and opened the abdomen and removed the fœtus and ligated the vessels. Patient recovered.

Mrs. B., abdominal hysterectomy for large myoma. Patient had been bleeding for two years; hydraemia to a marked extent. Two days later, at one o'clock P. M., pulse 128 and irregular. Transfused two and a half pints normal saline solution, pulse and respiration improved, but an hour later patient had a severe chill and went into collapse. One-thirtieth grain of strychnia was given and in a few minutes 15 drops of adrenalin chloride hypodermically. This was repeated every two hours. At ten o'clock P. M., same day, pulse could not be felt and patient was again transfused two and one-half pints. Just prior to this last transfusion patient said she could not see and felt that she was dying. This last transfusion was followed by jerky and labored respiration and she appeared to be suffering with œdema of the lungs, caused in all probability by too large a quantity of the solution that had passed from the right cardiac ventricle into the parenchyma of the lung. These distressing symptoms passed off after about an hour and the patient recovered. I could mention more cases but the above are enough to illustrate the results.

My object in mentioning these cases is: First, to draw attention to the fact that in plethoric subjects suffering with puerperal eclampsia it is first necessary to abstract a part of the toxic blood and then dilute with normal saline the remainder, thus diluting the blood overcharged with the toxins. That such is the result there is no doubt. Second, that in cases of exhaustion after serious surgical shock, with or without the loss of blood, it stimulates glandular tissue through the central nervous system. Third, that the introduction of large quantities of water either by rectum or mouth as a prophylaxis to shock exhaustion, is advisable.

My expérience with adrenalin in conjunction with normal saline solution is limited to one case. As an adjunct I think it is valuable as by its action the vasomotors are held in check and the intravenous saline solution equalizes the circulation. I have used the camphorated oil in three cases, I have of course also used the strychnia.

I have used normal saline in the abdomen following abdominal sections and I am sure with good effect. In conclusion I wish to sound a note of warning against too large quantities into the veins for fear of rupture of the vessels or fatal edema of the lungs. I believe that many lives are daily lost both in obstetric and surgical practice on account of the non-use of this valuable life saving agent.

Linmar Bldg.

OSTEITIS DEFORMANS.*

By Malvern B. Clopton, M. D., St. Louis, Mo.

Although similar conditions in bones had been previously described and variously called by different authors—indeed, the term "osteitis deformans" was first introduced by Czerny in 1873 to describe a case of spontaneous curving of the lower legs, it remained for Paget, in 1876, in his paper "On a Form of Chronic Inflammation of Bones" to first describe the disease entity as we now understand it, and to give a full clinical history of five cases of his own. After this first paper, Paget saw and reported 23 cases, and his name very properly became established in its nomenclature. There have been some 75 true cases of this disease reported to date; about 20 of them are from America, most of them from England, some from France, and a few from Italy, Austria, and Germany.

It is a disease occurring in middle life, attacking many bones, producing a peculiar softening and bending of the osseous system without impairing the general health or affecting the viscera. The course is chronic, lasting from five to eighteen years, and never the direct cause of death. The deformity, however, as it progresses, makes the patients more and more helpless until in extreme cases they become bedridden; being usually of advanced age, they are susceptible to the intercurrent affections which cause death. About two-thirds of the cases are in males, and the average age of onset is about fifty years. One case reported began at twenty-eight and another at thirty-two, while one was eighty-two years of age at date of onset. There is no hereditary influence, and the disease, as far as can be found, has no connection with syphilis, gout, rheumatism or tuberculosis, but is probably a general disease which has its principal lesions in the osseous system, and is due to some disturbance of nutrition of undetermined origin. It is generally agreed that there is no definite relationship between this disease and the nervous system. There have been a few far advanced, helpless cases that have shown degenerative conditions in nerve trunks and the spinal cord; these have given weight to the nervous theory. Experimental division of the sciatic in dogs has been followed occasionally by bony enlargement of the lower extremity, but this is not a constant finding.

As the joints are rarely affected in Paget's disease, we must look for typical changes in the shafts of the long bones. These have been studied by several observers. Paget laid chief emphasis upon the inflammatory absorption of bone associated with the formation of lacunæ. He believed the fibrous character of the bone marrow to be due to the long

*Read before the St. Louis Surgical Club, December 13, 1905.

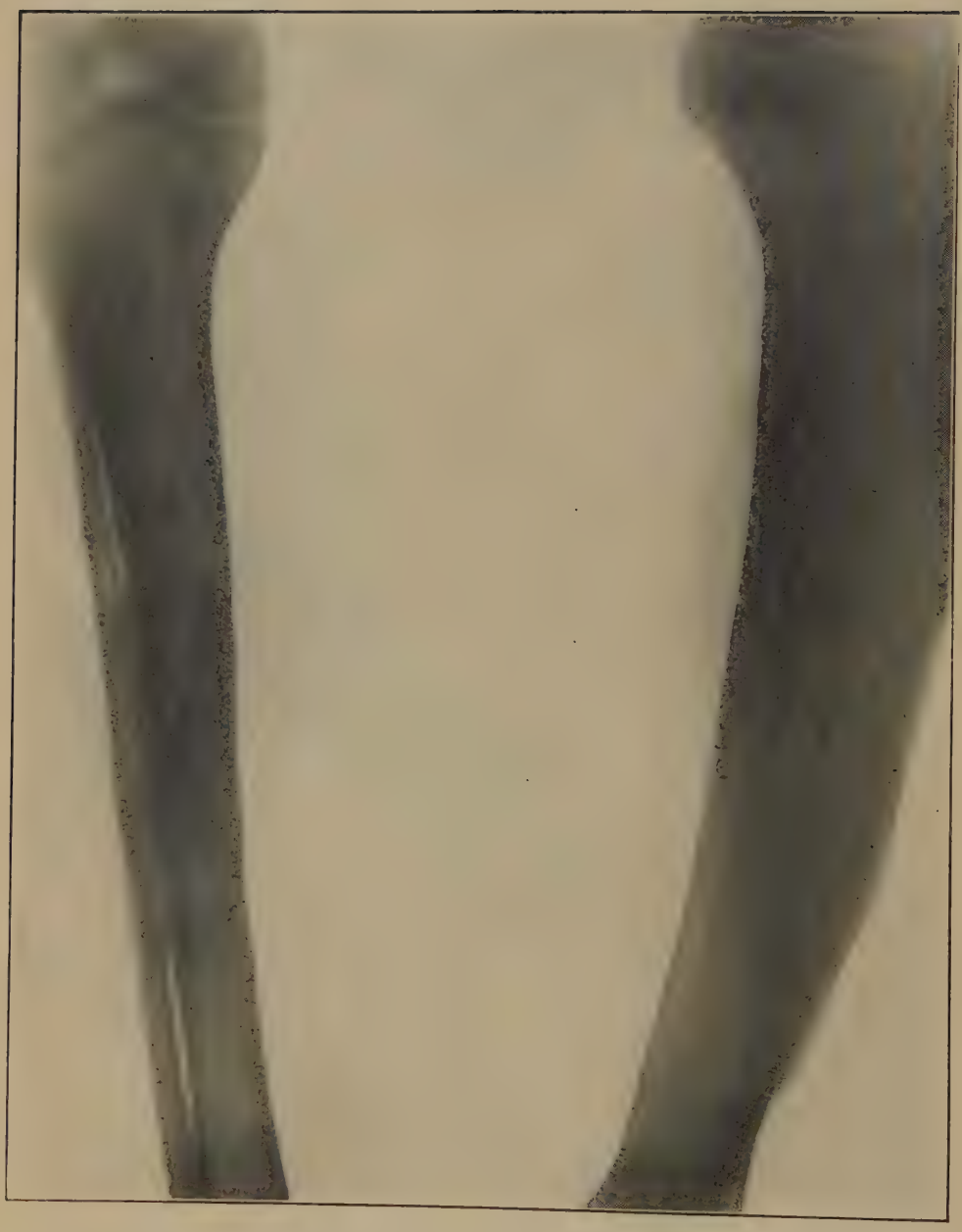
duration of the inflammatory process and called attention to the large blood vessels and increased vascularity.

Stilling, in reporting three cases, states that the disease begins beneath the periosteum and gradually involves the center of bone with the formation of Howships lacunæ, Haversian spaces and perforating canals. In these changes he believes the disease is similar to rarifying osteitis, but in addition to the absorption, as in all chronic inflammation of bone, there is a new formation of bone, partly in marrow and partly beneath the periosteum. Absorption gets less as new formation continues, and thus the bones become thickened. As the new formed bone remains uncalcified for a long time, it yields to pressure and bends. There may be areas of calcification irregularly placed throughout the bone, and cysts containing cloudy contents may also appear. Von Rechlinghausen believes that the beginning is an osteomalacia with marked reduction of the cortex which allows the bone to bend, followed later by an inflammatory process developing in the malactic areas, which is characterized by the formation of fibrous tissue.

Steele, studying a typical case, believes that there is an absorption of the compact substance causing an enlargement of the Haversian canals. There is a formation of new bone which runs diffusely through the affected and the adjacent healthy portions. This new bone remains uncalcified and is in turn resorbed. The medullary substance is converted into a vascular connective tissue containing fat cells, giant cells and leucocytes. Attention must be drawn to the fact that the deposit of new bone does not occur on the side of the concavity, where it would, if it followed the dynamic law, but it is along the convexity of the bone and along the normal ridges.

The clinical picture of an advanced stage of this disease is most easily recognized. The stature is greatly decreased, the spine curves in a long bend forward, the thorax becomes misshapen, the much enlarged skull with the apparently smaller face protrudes in a peculiar manner as if too heavy for the cervical vertebræ and hangs close to the chest. The tibiæ bow forward and the femora outward; the pelvis becomes broader and the bandy-leg effect is much accentuated. The height of the patient in consequence of the curving of the bony supports is lowered oftentimes as much as a foot, and the arms then appear to be much too long. The whole picture is most impressively simian. The bones most frequently affected, in the order of frequency, are the skull, tibiæ, femora, pelvis, spine, clavicles, ribs, and radii. While the disease is usually progressive, it frequently does not involve all the bones, and in some cases it seems confined to one or few bones for many years. Fractures are not infrequent, and in many instances draw attention to the condition. Pain in the bones is found in certain cases and entirely absent in others. and some cases suffer pain only when in motion, particularly those with

Case 1, Fig. 1.—Showing formation of lacunæ and irregular cyst-like space with a thickening of the bone, and marked bowing forward. Fibula normal. Left leg.



CASE 1, FIG. 2.—Showing outward bowing of left tibia with extra deposit on the convexity. Practical disappearance of all old bone tissue in center and upper parts of tibia. Right tibia and fibula practically normal.

marked spinal curvatures. There is a certain number of cases of Paget's disease that later on developed sarcoma of the bones, usually of the giant celled variety.

In differentiating this disease, osteo-arthritis and rheumatoid arthritis can usually be eliminated, because Paget's disease rarely attacks the joints. However, there is frequently limitation of motion due to the mechanical interference of the bony overgrowth outside of the joints, which might lead one in a superficial examination to believe that the joint itself is involved. Some writers, however, are inclined to believe there is a connection between these chronic rheumatisms and Paget's disease. Acromegaly involves the bones of the face, hands and feet, portions of the body rarely or never attacked by osteitis deformans; besides in acromegaly there is an accompanying increase of the adjacent soft parts, while in osteitis deformans the hands and feet are rarely affected and the enlargement of the head is due to the increase and thickening of the skull bones.

Osteomalacia is a disease occurring earlier in life, affecting the pelvic bones particularly, but also the long bones, in which there is no subsequent deposit of lime salts, nor is there the same thickening of the shafts or enlargement of the head.

Hypertrophic pulmonary arthropathy is a disorder characterized by an enlargement of the hands and feet, or ends of the long bones, particularly of the forearms.

Rachitis is a disease of infants involving that portion of the bones where growth is proceeding and is not accompanied by an irregularity of the surface except on the cranium. Hypertrophies, either simple or due to excessive blood supply, or from local inflammatory processes, can be distinguished. A large proportion of these cases of Paget's disease develop in connection with the arterio-sclerosis and anything that will be of value in such a condition might influence the course of the disease. Otherwise treatment is of no avail.

The cases I have to present are two. One I saw with Dr. Mudd, in April, 1904, a woman of 56 years, the mother of several healthy children, still menstruating and in otherwise good health, who had noticed for the previous year pain in her left ankle and knee and in the shin bone. Twelve years before she had noticed the left leg enlarging, and it progressed for about a year, without much discomfort, when it stopped enlarging and has not increased much since. There has of late, however, been noticed a bowing of this leg and a slight limp has developed. Walking has been more uncomfortable for the past five or six months, mainly on account of the subsquent pain in the knee and ankle, which she ascribed to rheumatism, having noticed nodes on the joints of her hands for several years. The phalángeal joints show a slight enlargement, due to osteo-arthritis. An examination showed the left tibia bowed forward

and slightly out, and a slight change in the lower end of the femur, making it impossible to bring the knees together by two inches. There was a slight shortening of the whole left limb. Otherwise no other skeletal change was made out. There was no skin change or reddening over the tibia. Six months later I saw the patient and found an increase in the tibial curve on left side, and learned that locomotion had become more and more difficult. On the right side a thickening of the tibia was becoming evident and there was slight pain in the bone. Except for this change there was no apparent progress of the disease.

The second case was a woman of 72 years, with a fracture of the left femur at its middle, whom I was called to see in February, 1905. While descending a small flight of steps she had stumbled and broken her thigh. The fracture was oblique in the shaft of a bone that was bent two inches out of line, bowing forward. The opposite femur likewise was bowed and showed an increase in its diameter, though not so much as in the broken leg. The tibiæ were bowed forward and much thickened. She suffered very little pain from the break, and had practically no pain in her bones previous to my seeing her. There was no evident change in the pelvis or other bones except the clavicle, which was much curved, but not thickened greatly. Her injury prevented a study of the changes in the back. She was put in a Hodgen splint and at the end of six weeks there was quite a strong fibrous union in the fracture. At this time she developed a hypostatic pneumonia and died after three days, six weeks from date of injury.

Her past history could not be well obtained, but it was learned that she had been an alcoholic for years, but had been able to live in her squalid quarters doing her own work. She had several grown children, who were healthy, and they said that their mother had been well except for a pelvic trouble, which I judge to be prolapse of the uterus, although when I saw her it was not evident. An autopsy was refused.

The skiagraphs of the first case show clearly the bony condition which is typical of Paget's disease. The change is confined to the shaft of the tibia, which is one of the first bones involved, and it is seen that the fibula is normal. In the second case it was impossible to get a skiagraph.

Humboldt Bldg.

REPORT OF A CASE OF TRAUMATIC DIPLEGIA—OPERATION—BENEFIT.*

By William S. Deutsch, M. D., St. Louis, Mo.
Instructor in Surgery, and Senior Assistant Surgical Dep't., Washington University, Associate Surgeon to The Jewish Hospital.

The case which I present this evening I feel merits our consideration because it demonstrates what surgery can do for this class of cases when they are brought early to the operating table. In this case even after a lapse of almost two years following the injury, it became possible to benefit the patient materially.

On July 27th, 1905, J. W., aged 41, married, came under observation during my service at the Jewish Hospital, complaining of intense headache, which he hoped to have relieved by surgical intervention. The patient gave the following history:

Family history, mother died of phthisis; father living and healthy. Other family history negative.

Personal history, On Nov. 28th, 1903, while coming up the hatchway of a ship, struck his head forcibly against a rafter, which caused him to fall to the floor. He claims to have retained consciousness, but immediately after the accident was unable to move either of his limbs, could not articulate correctly, and that his vision was greatly affected. Defecation voluntarily was impossible and catheterization of the bladder was necessary for about five months. A yellowish discharge was noticed from both ears. The patient remained in bed for three or four months and the ability to move his extremities gradually returned and in the course of time he was able to walk, but with a limping gait. The improvement became especially noticeable in the right upper and lower extremities, but has always remained poor on the left. Since receiving the injury the patient complained of continuous and severe headache, which in the beginning was rather general, but for the past year has been confined to the right side of the head. Bending forward, coughing or sneezing increased the severity of this headache. All therapeutic measures, anti-luetic not excluded, were tried without relief. The patient distinctly states that during all of these months he had no convulsions and never lost consciousness.

Physical examination—Heart of normal size, no murmurs, no accentuated sounds, heart beat somewhat accelerated. Abdominal organs normal.

Urinalysis—Light amber, specific gravity, 1028; acid reaction, no albumen or sugar. Microscope shows neither casts nor pus.

I asked Dr. W. W. Graves to examine the patient with me and the following is his report of the neurological findings: The shaven head

*Read before the St. Louis Surgical Club, January 10, 1906.

shows a small irregular scar at a point about two inches above the insertion of the right ear. There is a well marked fissure, beginning at a point about one inch above and one inch anterior to the insertion of the right ear and extending across the vertex to a similar point on the opposite side of the head, but becoming less defined about the median line. The fissure is independent and behind a slight depression which is evidently that of the coronal suture. The skull in the right parietal regions is extremely tender on firm pressure and this tenderness covers an area about the size of the palm of a hand, and extends slightly beyond the median line. The scalp is not thickened and to the palpating finger differs in no manner from the adjacent parts. The percussion note within this tender area is notably duller than on the opposite side, particularly so over that portion of the skull corresponding to the middle and upper Rolandic area. Patient shows no speech defect. He understands what is said to him, has no trouble in uttering the most difficult words nor any difficulty in naming various objects. He can read, and reproduction of subject matter is normal. He is also able to write both from dictation and from copy. Mentally the individual is normal. Pupils are of medium dilation and react in a normal manner. There is slight nystagmus when the eyes are in extreme position laterally, more marked on the right. Facial innervation is symmetrical and the tongue is protruded in the median line. Hearing slightly defective in the left ear, otherwise, cranial nerves show normal function. With feet approximated and eyes closed, no disturbance of station. Patient's gait is spastic, more marked on the left than on the right. In walking he carries left upper extremity in the position of adduction at the shoulder, flexion at elbow and wrist, with fingers slightly separated and extended, and the toes of both feet drag the floor, but more on the left than the right. Patient is able to make all necessary movements with the right upper extremity but outward rotation at the shoulder is defective. Whereas, with the left only slight flexion of fingers, flexion at elbow and abduction at shoulder is possible. Patient can elevate both shoulders in a defective manner, the right better than the left. The movements of the right upper extremity are slow and with deficient strength, and passive movements reveal a spastic condition, especially in pronators. Passive movements of lower extremities reveal spasticity in the adductors, quadriceps-extensors and calf muscles, more decided on the left than on the right. Tendon reflexes are uniformly exaggerated, more marked on the left than on the right. Patellar and ankle clonus present on both sides. Babinski's and Oppenheim's reflexes present on both sides. Cremasteric reflexes present but very weak. Abdominal reflexes absent on both sides, in all divisions. The sensations, touch, pain and temperature show hypoesthesia on the left and hyperesthesia on right. Stereognostic sense not disturbed on either side.

Otological examination made by Dr. M. A. Goldstein gave the follow-

FIG. 1. Characteristic pose before operation.

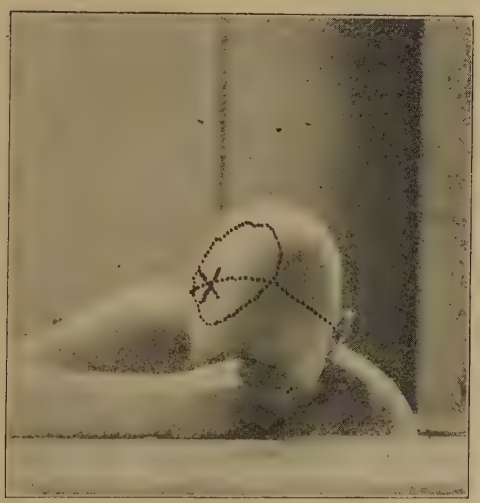


FIG. 2.—Dotted lines showing area of dullness and pain.

ing: Tuning fork and watch tests both by air and tone conduction indicate impaired function of the auditory nerve on left side. Renne's test is positive test, and Weber's test verifies Renne and other tone conduction with tuning fork. Inspection reveals a decided retraction of left membrani tympani. The malleus is very prominent, the lustre of the drum membrane is impaired. There is a circumscribed marked opacity of the posterior inferior quadrant, either cicatricial or calcareous in character.

Dr. Henry Wolfner reports ophthalmoscopic and other eye examinations negative.

After studying the history of the case as presented it became apparent to me that an operation might benefit this patient. From the findings we have a positive evidence of an injury as portrayed by the fissure in the skull, local tenderness and dullness on percussion of the trauma, no involvement of any of the cranial nerves and with the presence absolute of disturbances in both motor areas, I had to conclude that I was dealing with a lesion, most likely a hemorrhage or its results, of the convexity, and especially of the motor areas. I took it that improvement after the injury, in some respects, of the patient was an attempt at absorption of the results of the hemorrhage, but that there must still remain enough of a lesion to account for these pressure symptoms. Dr. Graves agreeing with me that an operation was indicated and with the salient points of the history before us, viz.: that we found a positive fissure in the skull, a localized area of tenderness corresponding accurately to the location of the headache of which the patient complained, the dullness on percussion at the same place, I felt that an attack at this point and a thorough exploration of the Rolandic area on the right side was indicated.

On August 8th, 1905, twenty-one months after the injury, I operated. Under ether anesthesia and assisted by Drs. S. E. Newman, W. M. Robertson and D. C. Goodman, I made the usual incision, oval in shape, with the convexity towards the crown, and its pedicle towards the base, and carried it down to the periosteum. The flap bleeding, no more than usual, was arrested by forceps and ligature, the forceps removed as soon as possible to do away with pressure on the scalp tissues as much as possible. The periosteum with its overlying parts was then detached from the bone with a periosteal elevator, and the entire flap turned down and covered with warm saline cloths. With all bleeding arrested the motor area was sought for and the largest circular trephine applied. The skull, besides being somewhat thicker than usual, offered no impediments, nor showed any peculiarities, and a large button was rapidly lifted out. At once the attention was directed to a bulging into the opening of a dark mass, not pulsating to the finger. With the DeVilbis and Rongeur forceps the skull opening was now materially enlarged, and since the same bulging continued, a second button was removed, and the two openings

connected by a wide groove. It was now apparent that we had to deal with a mass that was fluid and one that was putting the dura on the stretch. With a finely pointed eye scissors the dura was incised and at once a quantity of bloody fluid escaped, allowing the dura to retract and flatten out. The gush of blood was enough to at first frighten me into believing I had cut into the longitudinal sinus, but my fears were soon allayed when after careful sponging I found I had opened a distinct cavity containing blood. After some little cleansing of the territory with a warm saline solution I replaced the flaps of the cut dura and united them with one fine silk suture. When the skull opening had been enlarged in all directions with a Rongeur forceps so as to relieve any possible pressure, the scalp was replaced and sutured in the ordinary way and a firm dressing applied.

The patient was returned to bed with a fair pulse and no apparent effect from the operative procedure. I had not yet left the hospital when the nurse reported that my patient was having a severe convulsion, which lasted about five minutes. During the first twenty-four hours following the operation the patient had thirty-six convulsions lasting from one to six minutes, showing the following type. Twitching of facial muscles on the right with head and eyes turned to the right. Twitchings in left shoulder and left arm with short period of unconsciousness. These convulsive seizures grew less frequent each day, ceasing after the fourth day, and the patient since then has had no convulsions. The patient made an unusually rapid recovery from the operation, the wound healing by first intention and it was difficult to induce the patient to remain in bed after the seventh day, for he claimed to be feeling well. From the tenth day, with a simple cap dressing he was allowed gradually to get up. The slight facial paresis on the left side, which was noticed after the first convulsion, evidently an exhaustion paresis due to the convulsive seizures, and which affected particularly the muscles of the left side of the face, disappeared.

On examination of the patient's nervous system on October 14th, Dr. Graves reports as follows: No longer local tenderness in right parietal region. Condition of left upper extremity, as far as motility is concerned, slight improvement in this, that the patient is now able to flex his fingers, and flexion and extension of elbow, abduction and adduction of shoulder much improved. The rigidities in the muscles of arm and forearm much less. In walking, patient is still somewhat spastic, but the toes no longer drag the floor. Spasticity of left lower extremity much less than before the operation, and muscular power to resisted movements in the formerly paretic muscles greatly improved. The tendon reflexes of upper and lower extremities still greatly exaggerated. Babinski's and Oppenheim's reflexes still present on both sides. Abdominal and cremasteric reflexes same as before operation. The usefulness of the right

upper and lower extremities show decided improvement. Headache, which was the patient's main object in seeking relief, has not been present since the operation.

To sum up then, I feel gratified with the results of the operation, since the patient is improved in many ways. The headaches, which were the bain of his existence, have been entirely relieved. His power of locomotion is much better, and he is now able to get around very well. He is in good humor and says life is now worth living. I had intended showing you the patient this evening, but he left a week ago for his home in Arkansas and I am not able to do so.

I wish to thank Dr. D. C. Goodman, interne at the Jewish Hospital for the valuable notes taken of the case before and after the operation.

PLEMPIUS OF LOUVAIN.

By James Moores Ball, M. D., St. Louis.

Among our readers there are probably few who remember to have heard of Plempius. Yet in his day he was a power, a leader in medical thought, a powerful antagonist in argument, a philosopher, a great teacher, and a seeker after truth who was open to conviction. If his views cause us to smile in superciliousness and scorn, let us remember that two hundred years hence our great men of today may meet the same fate. He was wise in his day and generation; so, perhaps, are we —but who can say that our deductions are correct, our ideas exact, our so-called science immutable?

Like many another man prominent in the history of medicine, Plempius is remembered chiefly for having been on the wrong side of an argument.

Born at Amsterdam on the 23d of December, in 1601, he was educated in the humanities at Gand, in philosophy at Louvain, and in medicine at Leyden, after which he passed into Italy for post-graduate instruction at Padua and Bologna, receiving the degree of the latter university. Returning to Amsterdam, he began the practice of medicine. In 1633 he was called to the chair of medicine in the University of Louvain. He died in that city in 1671. Such is the brief record of his life as found in Dezeimeris' *Dictionnaire Historique de la Medecine Ancienne et Moderne.* It omits the most important episode in the life of Plempius—viz., his controversy with Descartes regarding the circulation of the blood as announced by William Harvey. When Harvey announced the discovery of the circulation, he met with the greatest opposition. He was denounced as an imposter; the Latin word "circulator" (a quack) was applied to him; his practice fell off; the vulgar regarded him as crack-brained, and all the physicians were against him.

VOPISCUS FORTUNATUS PLEMPIUS AMSTELRHEDAMENSIS MEDICIN
DOCTOR ET PROFESSOR IN ACADEMIA LOVANIENSI
Natura, arte, et fortuna.
NATURA, si metiris indolem, favit:
ARS incubando semen inditum fovit:
Dignum Viro FORTUNA nomen adjecit.
Qua terna cum Medicum expleant; ibi excellant
juxta Galenum in PLEMPIO revixisse.
I. Backer pinx.
T. Matham fe.

Cat.

The medical world was not prepared to believe that the blood undergoes a ceaseless circular motion with the heart as a propelling power. Primrose of Scotland, Parisanus of Venice, Hoffman of Nuremberg, Vesling of Padua, and others fought the Harveyan doctrine. Harvey, however, was not to battle unaided. Rene Descartes, the celebrated philosopher, in 1637, nine years after the discovery was announced, said: "But for an explanation of the reason why the blood of the veins is not exhausted by passing continually into the heart, I must refer to the work of an English physician, to whom belongs the honor of having first shown that the course of the blood in the body is nothing less than a kind of perpetual movement in a circle."

Plempius answered Descartes. At first he could not believe the ancients to be wrong. He began to reason and to experiment. He went over Harvey's work step by step. He made the same experiments, repeated them time and again, arrived at the same conclusions, and decided that the ancients were wrong, and that Harvey's doctrine was the truth. Then he had the manhood to say:

"This discovery did not please me at all at first, as I publicly testified both by word of mouth and in my writings; but by and by, when I gave myself up with firmer purpose to refute and expose it, lo! I refute and expose myself, so convincing, not to say merely persuasive, are the arguments of the author; I examine the whole thing anew and with greater care, and having at length made the dissection of a few live dogs, I find that all his statements are most true."

This indeed is the language of an honest man, and such was Plempius of Louvain.

TWO UNUSUAL CASES OF TUBAL PREGNANCY.*

By Chas. H. Dixon, M. D., St. Louis, Mo.

The condition of ectopic pregnancy is much more frequent than is usually supposed. There has not been the attention directed to this condition during the last few years as has been to other troubles. If so, I am sure more cases would be reported and a number of pelvic troubles could be traced to this condition.

There has been little new written on the causes of this condition, some contending that it is due to some changes in the tube while others again say it happens in conditions which are normal.

Mrs. B., age 34, Sept. 24, 1904; nativity United States; housewife. Family history, negative.

First menstruation between 13 and 14; regular; painful at beginning, duration, four days; not very profuse; married at 24; Conceived two

*Read before the Surgical Club, December 13, 1905.

months after; labor normal, nursed baby; menstruated at fourth month following labor, regular, not painful, duration, four days; no leucorrhoea. Had three subsequent conceptions with normal labors; no miscarriage. At the second labor she had seven post partum hemorrhage, otherwise the labor was normal. Has four children living, ages ranging from eight years to two years and nine months.

Three years ago she had a cystitis, but knows of no cause; has had painful micturition off and on since that time. No leucorrhœa, backache or painful menstruation, always menstruated at third or fourth month following labor. Nursed all her children.

Menstruated regularly from May, 1902, till Sept. 1, 1904, which period she missed. On Sept. 14th, she noticed a slight flow of blood which commenced with a severe pain lasting a few hours, starting in region of rectum and extending towards the stomach, accompanied with nausea. Eight days after had another severe attack of pain coming on suddenly of the same character and location as the former attack, only more severe; flow was continuous but no increase. Two days later pain was general over abdominal cavity. Examination showed slight rigidity of muscles over right inguinal region, flatness on percussion and some soreness; vaginal examination showed large swelling, soft and painful on the right side extending posteriorly.

Sept. 26th, had another attack of pain early in the morning, more severe than the preceding ones, but of same character and location; pulse fast and weak, face blanched. She had been removed to hospital the day before operation, and a few hours later the cavity was full of blood, the bleeding from right tube. Recovery uninterrupted.

May 22nd, 1905. Was called again to see patient; found her suffering from pain in left side, paroxysmal in character. Says she menstruated October, 1904, December, 1st and 26th, 1904, January 9th, February 1st, March 1st, March 18th and April 13th, 1905, since which time the flow has continued. Has had none of the usual symptoms of pregnancy. No pain at any menstruation except April 13th, was curretted on May 12th, but flow did not cease. Examination showed large swelling in left pelvic region, pointing downwards, painful and soft, uterus slightly enlarged, pulse quick and weak, no temperature. Some rigidity of muscles over left side. Removed to hospital at once. During that night had severe attack of pain accompanied with nausea and fainting. Operation showed rupture of left tube; had first extended downwards into meso-metrium, last one into abdominal cavity. Tube removed. Recovery uninterrupted.

Mrs. M., age 21. Nativity, United States. white, housewife. Family history, negative. Personal history, always has enjoyed good health. First menstruated at age of eleven; menstruated every five or six weeks, lasting six days; for three days flow was profuse, no clots and but very

little pain. Never missed a period. Never had any uterine, ovarian or vaginal trouble that she is aware of.

Last menstruation was October 19th to 25th; normal in character and quantity. Was married November 8th, 1905, used vaginal spray to prevent conception. Enjoyed good health till November 23d, when she noticed a slight discharge of blood, preceded by a severe pain extending low into the rectum; pain continued more or less all night, easier in morning and quite comfortable till the morning of November 28th, up to which time flow was continuous but slight. On morning of November 28th, was taken with violent pain in right side extending low into the rectum; there was nausea and faintness, extreme pallor of face and cold extremities. About three hours after attack, found patient cold, clammy perspiration, pulse weak, irregular, intermittent, barely perceptible at times; impairment of vision, rigidity of muscles over right inguinal region with some flatness and pain; temperature, subnormal.

Vaginal examination showed bulging to right and posterior to uterus; could detect no enlargement of the uterus. Operation four hours after attack; found cavity full of blood; tube slightly enlarged and oozing through the everted fimbriated extremity of tube; nodular in two places. Tube removed, recovery uninterrupted.

I have had seven cases of tubular pregnancy in the last year, fifteen cases altogether, with one death, which was my first case. They have been all on right side except one in which there was the secondary pregnancy. In most of them there has been rigidity of muscles over side of the trouble, although the absence of rigidity is given as a sign of distinction between this trouble and appendicitis. The choice of operation was through the abdominal cavity.

CLINICAL REPORT.

ACUTE DILATATION OF THE ARCH OF THE AORTA.

By W. J. Calvert, M. D., Columbia, Mo.

Mrs. B. White, American, age sixty, came to Parker Memorial Hospital medical service for treatment. In this consideration the history of the case and a complete description of her condition are unnecessary. In addition to her nervous condition, many of her symptoms pointed to a carcinoma of the stomach, but neither a tumor mass could be felt nor stomach washings obtained. A small nodule appeared in the skin over the left clavicle, the removal of which, under cocaine, was the immediate cause of the findings to be described.

Physical examination on admission was negative save as follows: Radial arteries hard; right radial pulse preceded left radial by slight interval; heart was moderately enlarged with strong apex beat; rough systolic murmur in aortic region which was not transmitted to arteries of the neck; loud blowing diastolic murmur of aortic insufficiency, but heard in third left interspace at edge of sternum, also, in second right interspace and at apex of heart, not well heard over lower portion of sternum. Systolic murmur heard at mitral opening, transmitted to axilla. Second aortic sound was ringing in character. No abnormal pulsations or other murmurs or areas of dullness could be found. An aneurism of the arch was considered but the signs were not deemed sufficient to warrant a positive diagnosis.

When the nodule over the left clavicle became about one-fourth of an inch in diameter, the patient was persuaded to have it removed under cocaine. Sections showed a carcinomatous growth. During the operation, marked pulsations of the large vessels and a softening of the under portion of the clavicle were noted and the presence of an aneurism discussed. A physical examination was made a few hours after the operation.

Physical examination: *Inspection*—Marked systolic pulsation in first and second intercostal spaces at right border of the sternum; marked heaving pulsations at upper border of sternum, with the groove behind it completely filled. Heaving apex pulsation. Arteries in neck showed marked pulsation. The heart beat could be seen over the entire thorax. *Palpation*—Shock of the heart beat could be felt over the entire thorax. Rough thrill at apex and in first and second interspaces to right of sternum. Apex beat heaving in character. Behind and on a line with upper border of sternum, a hard pulsating, expansile tumor mass could be felt. Tracheal tugging was very distinct. No pulsations to left of sternum in first and second interspaces were noted. Radial pulses were stronger and a few beats per minute faster than formerly. The left distinctly slower than the right. *Percussion*—Heart dullness slightly to left of nipple line, not elicited to right of sternum. At the upper right margin of the sternum, an area of relative dullness semicircular in shape was found, the border of which began at the union of the right third cartilage with the sternum, coursed upward and to right to a point on the second cartilage about one

inch from right border of sternum, thence upward and toward the mid-sternal line to the upper border of the sternum where it was lost. No dullness could be detected on left edge of the sternum. *Auscultation* unchanged save sounds were louder than formerly.

At this examination no doubt of the presence of an aneurism existed. The patient said that her heart seemed to be coming out of her thorax.

I felt somewhat guilty for having overlooked the aneurism and frankly confess that I had failed to make a diagnosis.

Signs noted—(1), difference in radial pulse; (2), pulsations in first and second interspaces and supra-sternal notch; (3), tracheal tugging; (4), dull area over aorta.

On the next day I was again surprised to find almost a complete change in the physical signs.

(1), The radial pulses were as first described; (2), the pulsations in first and second interspaces had almost disappeared. The tumor mass which filled the groove at upper border of the sternum had receded and could be felt with difficulty; (3), tracheal tugging could not be detected; (4), the dull area over the aorta could no longer be found.

Repeated examinations failed to reveal the findings of the day of the operation. An acute dynamic dilatation of the arch of the aorta had occurred.

The clinical picture finally terminated. An autopsy was denied.

In this case the dilatation of the aortic arch may be explained as follows: (1). The extreme neurotic condition of the patient may have played a role. (2). Two factors in the physiological action of cocaine are undoubtedly of importance. The variable susceptibility of individuals to cocaine is well known. Cocaine increases the frequency of the heart beat and contracts the peripheral arteries. Each of these factors tends to increase the blood pressure in the arteries. When the two factors are present at the same time, a decided rise in the blood pressure follows, which acting on (3), a weakened arterial wall, might easily cause a temporary dilatation.

In this case a general artero-sclerosis and most probably an arterio-sclerosis of the arch of the aorta, were present. It is also probable that there was an aneurismal dilatation. But the presence or absence of an aneurism is of minor importance in this connection. The weakened wall of the aorta from sclerosis, and the increased blood pressure are the two essential factors. Judging by the forcible heart beat, the rise in blood pressure must have been considerable.

It is to be regretted that the actual condition of the arch and the after effects of the dilatation could not be followed at autopsy. It is most probable that in this case the arch did not return to its former size.

Acute dynamic dilatation of the arch of the aorta is rarely observed. Dilatation of the arch in cases of aortic insufficiency is not uncommon. There the condition is constant for longer periods of time.

EDITORIAL COMMENT.

REFLECTIONS ON THE REPORT OF THE JOINT MEDICAL COUNCIL.

The amendment to the city charter embracing the scheme for a visiting staff, board of trustees and an executive superintendent was indorsed by the St. Louis Medical Society at the meeting of February 3d. With the complicated hospital situation in this city, it is not to be wondered at that the report as finally submitted should contain some features which are open to wide difference of opinion. It is rather remarkable that the fundamental principles concerning hospital management should have found so strong an unanimity of opinion as to become finally embodied in the proposed amendment. The minor faults of the report will no doubt be modified when the proper time comes, for it is not to be thought that this is the final draft of the measure.

In its main principles the bill is fundamentally good. A visiting staff of only average ability would be an improvement on the present method, and it is very probable that in whatever way the staff is chosen it will be at least an average one. The question of permanent appointment is, however, open to the strongest criticism, and it is questionable if the intelligent voter will support a measure embodying this feature. The best experience has shown that the members of a visiting staff should be appointed for a term of years and reappointed of course during satisfactory service. In view of the fact that a visiting staff is a new thing in municipal hospitals here, it might be well to safeguard their performance with all the features of incentive to good work that can reasonably be applied.

The question of medical members on the board of trustees is a matter which will always arouse discussion, and the root of the difference of opinion lies in the reasonable assumption that in professional matters the physician is not apt to be fair. It serves no purpose to rail at this feeling, nor to be blind to its existence. That such is the feeling both among laymen and among physicians is a proof that there must be some reason for its emphasis. The unvarnished truth is that there is plenty of evidence both in this city and in other cities that the presence of a medical man on the board of trustees of a hospital has given rise to a great deal of unnecessary trouble. One reason for this is plain, and that is that a physician on a lay board soon comes to assume an importance in medical matters which is not necessarily in proportion to his justness and sense of fair play. He is assumed to have first-hand knowledge not only on medical matters as such, but likewise in respect to the qualifications of other physicians, and against the latter there is no opinion opposed which can be considered nearly so well informed. In just this one thing lies the danger, and if we are fair in the matter we must agree that this danger is not a theoretical one. It is unwise to insist that the qualifications of medical men are the ideal ones for membership to a board of trustees, when it is certain that there is so much

danger to medicine in general in introducing into the board the very dissensions which an intelligent view of the matter would tend to remove.

It can, however, be considered an advance in the medical history of this city that the report submitted was so essentially correct on the vital principles of hospital administration, and it is the part of wisdom to support such a measure enthusiastically for the good it contains and for the betterment it promises, and to leave the minor faults to a time when they may be calmly corrected.

The question of a visiting staff to the Insane Asylum is one upon which there will be opinions of various sorts and upon which the main point is apt to be confused. The problem in asylum management in a large city is quite different from that in a small town or village. The necessity in the latter for a superintendent is obvious, and there would be no place for a visiting staff at all. In a large city with a presumably able lot of men devoting themselves to neurology and psychiatry in a clinical way, the Insane Asylum offers just the needed opportunity to work out to the utmost their own specialty. It is just this necessity for clinical work on a large scale which is ordinarily denied to the class of men referred to on account of a blind adherence to the old and clumsy system of present asylum management. The following scheme is suggested as being practicable and at the same time offering the best possible educational advantages of a large insane material: There should be connected with the City Hospital, and as an integral part of it, a psychopathic ward or wards which should be under the charge of the visiting neurologists of the hospital as a part of their routine duties. To these wards will be sent all acute mental cases of whatever form they may happen to be. Such cases will be treated as hospital patients and intelligently studied from the points of view of diagnosis and prognosis. Such wards are already in active operation in several cities, notably in Albany, New York, and there is provision made for new ones in New York City. Patients thought to be incurable, or in whom the mental disease will probably take a long time to develop and to complete its evolution, should be sent to the Hospital for the Chronic Insane, which will be the present Insane Asylum with the material now at the Poor House (that is, the insane material) included. This may or may not be in the hands of a superintendent, depending upon the exigencies of the case. The point is, and it ought to be emphasized, that any one who attempts to treat mental cases at the present time ought to be in the closest possible touch with general medicine, and nowhere else can this necessary closeness be found except in a large general hospital. The use of the present Poor House in part as a convalescent hospital for the City Hospital would be a feature of the general scheme which is here submitted.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE

IN CHARGE OF

JESSE S. MYER, M. D.

THE RHYTHMIC SOUNDS OF THE ALIMENTARY CANAL. — Cannon (*Jl. Am. Med. Assn.*, Jan., 20th, 1906) finds that the most characteristic feature of the movements of the alimentary canal is undoubtedly their rhythmicity. Peristaltic waves pass in rhythmic succession over the stomach. In the small intestine the most usual activity is a rhythmic segmentation of the food. In the ascending colon, antiperistaltic waves rhythmically follow one another toward the cæcum. The author has listened carefully and attentively to the abdominal sounds for long periods of time and believes that it is possible to differentiate between the sounds produced by the stomach, small intestine and large intestine. By means of a telephone transmitter placed over the abdomen and activating through an induction coil a nerve muscle preparation he has secured graphic records of the sounds made by the stomach and small intestine wholly without the mediation of human judgment. The stomach sounds are best heard about an hour after a bountiful meal with the patient lying on his back and left side, and the stethoscope placed near the end of the eighth rib on the right side. The sounds heard here are loud, rattling, explosive and of characteristic quality. The rate of their recurrence varies from every seventeen to twenty-four seconds. The rhythmic sounds of the small intestines are very different from those of the stomach, being soft, muffled and sometimes a group of little rattling explosive discharges. Each sound lasts two or three seconds or more and the rhythm is persistent for some time in one place, occurring every seven to eight seconds. The sounds of the large intestine are noticed best in the right lower quadrant of the abdomen, are characterized by a succession of little popping noises and faint gurgling. These sounds indicate that the ascending and first part of the transverse colon are more active than the remainder of the large intestine. The sounds start in the transverse colon and their advance can be clearly traced. The sounds can be heard first faintly, then louder and louder, then gradually more faintly again. If the stethoscope is changed to a position farther along the small intestine the sounds can be again heard passing through the same phases as before. Whether the observation of the sounds of the stomach and intestines is to be of clinical importance will depend upon whether or not there are typical variations in different diseases of the alimentary tract. The author suggests that the method might be used to separate the somewhat vague expression, motile insufficiency, into its two factors, absence of peristalsis and pyloric obstruction.

[These observations are indeed very interesting and one who will take the time to listen carefully over the different portions of the abdomen indicated by the author, will be amazed at the differences in the quality, pitch and loudness of these sounds. I found the difference most marked when listening simultaneously with two stethoscopes, one attached to each ear, one being placed over the pylorus and the other over the cæcum.—Ed.]

A Study of the Determination of the Greater Curvature of the Stomach, with Special Reference to Radiography.—Schuele (*Archiv. f. Verdauungs-Krankheiten.* Vol XI, part 6) points out the sources of error in the ordinary methods of determining the position of the stomach, and endeavors to show that, after all, the radiograph affords us the most exact method. In carrying out these observations, the stomach was first outlined by the percussion-auscultation method, wires were fastened on the abdomen along these outlines, the patient was then given a meal containing a large quantity of bismuth and a radiograph taken. In some cases the two outlines corresponded, but in others there were great discrepancies. All in all, however, the author finds that the percussion of the full stomach in the standing position is fairly reliable. He points out the importance of using the radiograph with the patient in the standing position. In the inflation of the stomach one of the chief sources of error is the position of the transverse colon and its relations to the stomach, sometimes lying in front of the stomach and at others just below it. In either case, if the colon is inflated with gas, the percussion note over the stomach and colon will be identically the same.

The Sahli Desmoid Reaction.—Eicheler (*Berlin. Klin. Wochenschrift* No. 48, 1905) conducted a series of observations on some thirty patients with a view to testing the value of Sahli's desmoid reaction. This reaction is based on the fact that raw connective tissue fibres are digested in the stomach only and there when the secretions of pepsin and hydrochloric acid are relatively normal. Sahli recommended the ingestion of small rubber bags containing methylene blue, and the bags tied shut with raw catgut. As soon as the catgut is digested the methylene blue or iodoform is liberated and soon makes its appearance in the urine. It should appear within twelve to eighteen hours. If the secretions are not up to normal, then the catgut is either not digested at all and the little bags are expelled with feces, or is digested very slowly and the methylene blue makes its appearance in the urine at a much later period. Eichler found in his series of investigations that the Sahli method is very reliable and corroborated his findings by a comparison with the chemical findings in the stomach contents.

Sahli's Desmoid Reaction, a New Method of Testing the Gastric Secretions and Their Natural Relations Without the Use of the Stomach Tube.—Kuehn (*Muench. Med. Wochenschrift,* No. 58, 1905) conducted a similar series of observations on some fifty-four cases and corroborated in every way the claims of Sahli. He praises the

method very highly and believes that in a large degree it can supplant the use of the stomach tube.

THE PATHOLOGY OF RENAL DROPSY.—Bainbridge (*The Practitioner*, Dec., 1905).—This is one of a series of articles on the pathology of dropsy in general and presents a very complete yet concise review of the subject. The causation of renal dropsy, though still very obscure, presents certain factors which stand out prominently in its production. A scanty output of urine as indicated by the observations of Dickenson, and by the fact that in chronic nephritis the onset of cardiac hypertrophy and increased urinary flow are often accompanied by diminution of the dropsy, the retention in the body of sodium chloride and possibly other salts, owing to the deficient excretory power on the part of the kidneys; as a result of osmotic changes, the retention of salts necessitates the retention of water as well, increased metabolism in the muscles in consequence of a partial or complete loss of control over the muscular metabolism by the kidneys, brings about the accumulation in the muscles and tissue spaces of waste products. These by a process of osmosis attract water from the blood into the tissue spaces, which cannot be carried off by the lymph channels, thus edema makes its appearance.

THE DIAGNOSIS OF PERNICIOUS ANEMIA.—Emery (*The Practitioner*, Dec., '05) discusses at length the diagnosis of pernicious anemia and considers the signs individually and in detail as follows: (a) High color index, (b) the presence of megaloblasts, (c) the presence of megalocytes, (d) leucopenia, (e) relative lymphocytosis, (f) polychromatophile, and other forms of degeneration of the red blood corpuscles. He suggests that the diagnosis is best conducted on the following lines: Determine the color index and while counting the red blood corpuscles, notice incidentally whether any appear abnormally large, larger than one-third of the diameter of the half-square on the counting machine. If the index is so high as to arouse suspicion of the disease, proceed to make a leucocyte count. If this is low, make a differential count on a stained film, keeping a sharp lookout for neucleated polychromatophile or punctate form. If there is a relative lymphocytosis the diagnosis is very probable and the film should be examined for megalocytes. The next process consists in a further careful search for nucleated red blood corpuscles whether megaloblasts or not. If all the previous signs are positive, however, the author believes that the diagnosis may be made without their discovery.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

NOTES ON EXPERIENCES DURING THE RUSSO-JAPANESE NAVAL WAR.—S. Suzuki (*Sei-I-Kwai,* November 30, 1905).—This paper is so full of interesting narrative, as well as suggestions for the future, all of them founded upon ripe experience, that it will more than repay a perusal in the original. It is advised that very little surgery be done during the conflict. It had better be postponed, if possible, until the hospital ship, or the base hospital, can be reached. As a matter of course, the smoke, dust, and hurry incident to a battle make it almost impossible to maintain asepsis. About all that can be done on the ship is to ligate, or impress, in case of hemorrhage, clean out wounds and employ sterile dressings. It is astonishing how many shell wounds healed by first-intention, if merely the skin be united over them. This is a matter of the greatest importance, and upon which little stress has been laid.

The proper place for treating the wounded on the battleship is below the water-line, although very few ships have been properly equipped in this particular. Two such stations should be maintained, for one may be completely destroyed, as has happened.

The Japanese navy is drilled to first-aid work during peace, and this fact must be largely responsible for the comparatively low mortality among the Japanese in time of battle. Everything movable should be taken away from the exposed portion of the ship. Other objects, such as bridges and other target, should be covered with hammocks, which prevent splinters flying when these things are struck by shells. Hammocks, in addition, were found to be excellent life-preservers, and to their use many a man owes his existence.

When a steam pipe bursts, the best way to avoid scalding is by lying flat down on the deck. Before every battle the Japanese donned clean underwear, and at all times the whole body was kept perfectly protected. This latter precaution prevented burning of the skin many times, while the former, evidently, had a great deal to do with aseptic wound healing. No precaution prevented frequent deafness, following a battle, and the eyesight of the Japanese gunners was examined before every action. The reason for this is obvious.

THE CRUSHING OF GALLSTONES IN THE COMMON DUCT.—Langenbuch (*Revue de Chir.,* Jan., 1906) was the first to do this operation in 1886, although Tait had done the same thing in the cystic duct two years earlier, while others had considered the idea as early as 1858.

The author was able to collect fifty-three cases in which this had been done, and himself reports two personal experiences with it. It seems to be possible, even though the stones lie very low down in the duct and, consequently, in a position which makes them rather inacessi-

ble. However, failure in this last-named situation must be much more common than when they are higher up. There are three ways of doing this: 1st, with the bare finger; 2d, with forceps covered with rubber; 3d, by puncture with needles. This latter, however, is dangerous and has proven fatal, and is not specially to be recommended. Whether or not a stone can be crushed depends not so much upon its situation, or the technique employed, but rather upon its own consistence. Twelve per cent. of them are too hard for the operation to be done. It is not a dangerous procedure, although one can readily understand that the mucous membrane of the duct may be torn, and an infection ensue. It would seem that a great deal can be accomplished by this maneuvre.

Of the fifty-three cases mentioned, there were apparently thirty-seven cures in three days, and in the experience of others they have been seen as late as thirty-eight days.

The two objections to the operation are, that it leaves one in ignorance as to the condition of the rest of the duct, and does not permit drainage.

Jacksonian Epilepsy, with Left-Sided Paralysis, Due to Cysticercus in the Right Rolandic Zone.—(*Bul. de la Soc. de Chir. de Paris,* Dec., 1905.)—This most interesting recital has as its subject a boy twenty-three years of age who suddenly became unconscious two times in one week, each time recovering within a few minutes, and no ill effect left behind. Three months later he again lost consciousness, but this time with spasmodic contractions of the left arm. Then during the next five years these attacks came on every three or four months, usually occurring more than once in the same day.

Suddenly, at the expiration of this time, without any apparent reason, the left side became paralyzed and he entered the hospital. The right side of the brain was laid bare and a cyst discovered in the region above mentioned. This was removed and the patient recovered without incident. He had no more spasms, and the power to move the muscles of the left side gradually returned, until a few months later he was pronounced well. The microscope revealed the true character of the cyst to be hydatid.

My Method of Gastro-Enterostomy. — Fritz de Beule (*Zentralblatt f. Chirur.,* Dec. 30, 1905).—This author describes an original button, planned somewhat after the idea of the Murphy button, and introduced in very much the same way. The male, or lower half of this button, is so arranged that its lumen does not run straight through it, as we are accustomed to seeing, but this tube describes a quarter of a circle, the lower end coming out at the side of the flange. In this way it will be seen that when the button is properly in place, the stomach contents can be directed in any manner desired, and this is naturally down the gut. Illustrations render this new object to the manner of its use quite plain. Twenty-two cases are cited in proof of the practical usefulness of this button. By its use, the author hopes to avoid the accidents which have, heretofore, accompanied this operation.

DIAGNOSIS.

IN CHARGE OF

A. E. TAUSSIG, M. D.

ALIMENTARY GLYCOSURIA IN INFECTIOUS DISEASES.—P. F. Zucola (*Giorn. R. Acad. di Med. di Torino,* 1905, No. 4; *Bioch. Centralbl.* IV. No. 19.)—In sixteen cases of infectious disease (pneumonia, typhoid fever, tuberculosis and the like), the existence of an alimentary glycosuria was investigated. In all the cases, 150 g. of glucose-syrup was given on an empty stomach and no further food given during the course of the observation. The urine was collected every hour and tested for sugar with Fehling's solution. In health and in cases of mild infection no glycosuria resulted, but whenever the infection was severe, especially if it had lasted for some time, the urine contained sugar. The intensity of the glycosuria corresponded to the intensity and duration of the infection. As the alimentary glycosuria coincided with an intermittent excretion of methylene blue which is known to indicate a lesion of the liver cells, the conclusion seems natural that the glycosuria also is an indicator of the functional condition of the liver cells. Prognostically, also, the test would seem to be of some value.

SAHLI'S DESMOID REACTION.—F. Eichler (*Berl. klin. Wochenschr.* 1905, No. 48.)—Sahli's test consists in having the patient swallow, soon after his main meal, a small rubber capsule containing iodoform or methylene blue and tied off with a raw catgut thread. As the medicament cannot be absorbed until the catgut has been digested, and as the gastric juice alone is able to do this, the interval until the appearance of iodine or methylene blue in the urine is a reliable indication of the digestive activity of the gastric juice. The writer has tested this method in a number of cases and pronounces it very useful, especially in patients who refuse the introduction of the stomach tube or in whom for other reasons the use of the tube is not permissible. A positive reaction within fifteen to twenty hours indicates an adequate gastric digestion without, however, giving any information as to the existence of a hyperchlorhydria. On the other hand a delayed or negative reaction indicates a weakened or destroyed gastric digestion.

NYLANDER'S TEST IN URINE CONTAINING MERCURY OR CHLOROFORM.—H. Bechhold (*Zeitschr. f. Physiol. Chem.,* Nov. 1905.)—Sugar urines to which mercurial salts or chloroform have been added to prevent fermentation, or for other purposes, will not give a positive reaction with Nylander's test. Even prolonged boiling will give instead of a black precipitate only a yellowish or brownish discolorization. The latter is probably due to the caramelization of the sugar by means of the hot alkali contained in Nylander's reagent.

BURGHARDT'S SIGN IN INCIPIENT PHTHISIS.—Van den Welden (*Beit. z. klinik d. Tuberk.* Vol. IV, No. 2.)—As is well known, Burghardt has

pointed out that in the earliest stages of phthisis, in which as yet no signs of pathologic change can be made out in the apices, it is often possible to hear, on auscultation over the base of the lung, fine moist rales. The writer has studied this phenomenon in a large number of cases. He found that in 60 per cent of his cases of beginning pulmonary tuberculosis these fine moist rales could be heard over the lower edge of the affected lung, between the mammary and axillary lines. In advanced phthisis with well marked consolidation and cough, this phenomenon is hardly ever observed. He believes it to be of some diagnostic value. Its cause is probably an atelectasis of the pulmonary tissue at the lower edge of the lung due to a diminished activity of the corresponding half of the diaphragm.

Albuminuria Adolescentium.—B. Bramwell (*Brit. Med. Jl.* Oct. 7, 1905.)—During his thirty-four years service as school physician at Rugby, England, the writer has observed a great number of cases of albuminuria among the boys there. At first he was inclined to consider the occurrence of this phenomenon a serious matter. He has, however, been able to keep many of his patients under observation even in adult life and has seen practically all of them develop into perfectly healthy men. Even where the albuminuria persisted for months or years, no ill-effects ensued, in particular no chronic nephritis developed. As to the cause of this albuminuria, he divides his patients into three classes. The first has a high blood pressure, an unstable vasomotor apparatus and a tendency to gout. These boys usually eat too much meat. The second is anemic, has a readily compressible pulse and requires better feeding. The third class consists of neurasthenics and these usually show an albuminuria before examinations, and so forth. In none of these cases did a true nephritis develop. The importance of a knowledge of this albuminuria adolescentium is evident. It does not require any interference with the school life, mental or physical, of the children so affected.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

Diphtheria Antitoxin in the Treatment of Facial Erysipelas.—Tomaselli (*Gazz. degli Ospedali,* 18 June, 1905; *Zentralbl. f. gesam. Therap.* 1905, p. 636) reports three cases of erysipelas which yielded within twenty-four hours to the injection of 1,000 units of diphtheria antitoxin.

Therapy of Hemophilia.—Sahli (*Zeitschr. f. kl. Med.,* Bd. 56, 1905; *Zentralbl. f. d. gesam. Therap.* 1905, p. 661,) contends that our only well substantiated therapeutic indication in hemophilia is an effort to improve the general condition of the patient, especially by means of good and plentiful food, as an experience has pointed out. To combat superficial

hemorrhage pressure and gelatin compresses are useful, together with local applications of adrenalin. The subcutaneous injection of gelatin during hemorrhage is a questionable proceeding. Given by mouth gelatin does no harm but is probably also of little value. The internal administration of calcium chloride has given indefinite results. Ergotin is not only useless but entirely irrational. The internal or subcutaneous use of adrenalin is absolutely contraindicated.

AN ANTIGONOCOCCUS SERUM EFFECTIVE IN THE TREATMENT OF GONORRHEAL RHEUMATISM.—Torrey (*Jl. Am. Med. Assn.*, 1906, p. 261.)

THE TREATMENT OF GONORRHEAL RHEUMATISM BY AN ANTIGONOCOCCUS SERUM.—Rogers. (*Jl. Am. Med. Assn.*, 1906, p. 263.)

Torrey and Rogers report a method of obtaining an antigonococcus serum and the results obtained with it in the treatment of eight cases of gonorrhoeal rheumatism, including both acute and chronic forms. Various cultures of gonococcus were used, some obtained from active infections in male patients, others from cases of vaginitis. For purposes of inoculation a mixture of ascetic fluid and slightly acid beef infusion peptone broth was used in equal parts. This was distributed among tubes of 12 cc. capacity. The best results were obtained from cultures from six to fifteen days old which were killed by heating for several hours at 60 degrees C. Large rabbits were used in producing the serum and injections of 10 cc. of the entire culture were made at intervals of about four days. After six injections had been made the animal was bled, 70 to 90 cc. of serum being obtained. This was divided into quantities of 2 cc. and sealed without preservative. The serum is chiefly bactericidal, though in all probability it also contains an antitoxin.

Clinically the serum was administered subcutaneously in eight cases of gonorrheal rheumatism in doses of thirty to forty minims, every day, or every other day. There is generally an improvement in the pain and in the inflammatory condition at the end of twenty-four hours, and a complete disappearance of the disorder in a week or ten days, when the condition is acute, but it may be much prolonged in chronic cases. There is constant danger in the acute cases of a recrudescence after suspension of the injections, particularly if the urethritis still persists. It is important to note that the urethritis is very little if at all influenced by the serum. Of the eight cases treated, only one, a case of more than ten years' standing, failed to improve under the serum treatment.

The progress under the administration of the serum depends upon the promptness with which the condition was recognized. After the inflammatory process has continued for several weeks, new tissue and adhesions have formed, or destructive processes may even have begun. These changes cannot be influenced by the serum. The writers have found that great differences exist in the effectiveness of serum from different rabbits and of different bleedings.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

CONTRIBUTION TO THE QUESTION OF TUBERCULOSIS ON THE BASIS OF EXPERIMENTS ON ANTHROPOID APES—v. Dungern (*Muench. Med. Woch.* 1906, No. 1,) insists that to understand the relation of man to both types of tubercle-bacilli, the human and the bovine, two methods are at our disposal. The one followed so far, especially in the splendid work of Kossel and his associates, starts out with the cultivation of bacilli from human lesions and the investigations of the racial characters of the cultivated bacilli. The decisive points are mainly the higher virulence for cattle and some cultural differences. In this way the greater majority of cultivated forms were found to be of human character, while, in a few, mainly derived from intestinal and mesenterial lesions (only two from the lung) showed the characteristics of the bovine bacillus. The conclusion that these observations reveal the true nature of the behavior of the two forms of bacilli would only be justified if we with certainty knew that the bovine-bacillus does not undergo in the human organism a change of its pathogenicity. Experiments to alter the virulence of any of the two forms for different animals have given very contradictory results; altogether, it appears improbable that a change can be brought about in this way. Theoretically, therefore, we have no right, without experimentation on human beings to priorily assume that the bovine-bacillus is less virulent for man and not, perhaps, more virulent than the human form. The other method is the experimentation on animals nearly related to man, that in their biologic-reactions can hardly be differentiated from man (precipitin reaction, etc.). v. Dungern used, during his stay in Sumatra, anthropoids, of which two species of Gibbons (hylobates syndactylus and agilis) were at his disposition. The animals were inoculated subcutaneously with equal doses of living bacilli, the one series receiving the bovine, the other the human culture. All of the animals that did not die of intercurrent diseases died of tuberculosis, which in all cases showed a general dissemination over the body. A difference in the effect in the infection with bovine or human bacilli could in no way be established. Two other series of three animals each were infected by feeding the bacilli. Two of each series died; those infected with bovine-bacilli with a typical intestinal tuberculosis, while the two killed by human bacilli showed the oldest lesions in the lower lobes of the lungs. v. Dungern declares that for the last ones the infection by a passage of the bacilli through the intestinal mucosa and in addition through the mesenterial glands without leaving marks of their presence is to the highest degree improbable. He is rather inclined to believe in a direct infection by way of the bronchial tract. The analogy of these findings with human experiences suggests to the author that bovine bacilli in some way prefer the intestine as a port of entrance, the human the bronchial passages. Van Dungern's work is exceed-

ingly important, as it calls to our mind a factor that seems to have escaped the mind of most observers. Whether the material accumulated by him is sufficient to allow further conclusions is not certain. But it has shown the way in which, more directly than up to now the importance or harmlessness of the bovine bacillus can be determined. The author insists on its dangerous qualities, an opinion that must have suggested itself necessarily from the results of his experiments.

Intracorpuscular Conjugation of the Malarial Plasmodia and Its Significance.—Charles F. Craig (*American Medicine,* Vol. X, No. 24-25.)—The most important and significant contribution to our knowledge of the life of the malarial parasites and its relation to the course of malarial infection in man, that has been published since the work of Ross, Grassi and others some ten years ago, is this paper of Craig. It is the more interesting since it seems to show that we are still too ready to make so-called final conclusions. Craig's work has been anticipated by that of Ewing, who some years ago described forms of the parasite that he was inclined to believe to be the result of conjugation of two parasites attached to the same corpuscle. Unable to directly observe this process of conjugation, he left the subject unfinished. Craig has made it the task of an immense amount of work on hundreds of cases of malaria of every type and every clinical form to bring clearness. His result is that in every case of malaria, no matter what type, conjugation regularly occurs, not between the larger forms of the parasite, but always at the stage of the ring form. The process has been many times followed up completely in the fresh blood, and has in stained material been observed very frequently by all observers as rings with two chromatin dots. In older stages these conjugated organisms cannot be with certainty differentiated from unconjugated ones at the stage of chromatin division before sporulation, a point made in reflection on Ewing's observations. The time in the course of the infection and the frequency of the conjugation during it has been the object of much tedious work that, however, has resulted in facts that theoretically and practically are of great weight. It was found that in every case of malaria the parasites multiply for a number of generations asexually by sporulation and without conjugation, without causing any more than slight symptoms. After a certain time, the parasites become exhausted, as the expression is, and now conjugation begins, and, with conjugation, the clinical attacks of the disease. If, for some reason, the conditions for conjugation are not given, the parasites perish, and, clinically, we observe a spontaneous recovery. Craig's work has given a full explanation of the processes in the acute and recurring malarial attacks, the absence of the latter in latent infections, and the disappearance of the infection in cases of spontaneous recovery. Conjugation is a process to preserve the reproductive power of the organism by rejuvenescence. It is not necessary for sporulation, as in latent malaria. The latter obtains without conjugation. Conjugation in malaria is analogous to the same process observed in so many other protozoa, the interpretation of which by Bueschli was started in the way that Craig has indicated. It is always a means to rejuvenate a race exhausted by the continued fissions of the individual cell. Cal-

kins, for infusoria has illustrated this admirably. Practically, Craig's discovery will be of great value, as it enables us to deal now clinically with malaria on a much firmer basis than before. Indirectly, Craig's observations have been confirmed by the investigations of Koch on certain forms of piroplasma, in which he also saw conjugation.

About Resorption and Phenomena of Immunity.—E. Loewenstein (*Arch f. Hyg. u. Infect. Ur.* Vol. 51, H. 3.)—The very interesting and perhaps important suggestions made by Loewenstein are derived from experiments in all of which he inoculated rabbits with the same quantities either of tubercle or typhoid bacilli. In some, the site of injection was the anterior chamber of the eye; in others the subcutaneous or intravenous way was used. The eye inoculation remained local, while the other methods lead to death from tuberculosis. The serum of these animals was examined for their agglutinating quality. The eye animals showed no agglutination, while the others exhibited a high agglutinating capacity. It is shown, thus, that tubercle-bacilli and dead typhoid bacilli injected subcutaneously or intravenously, cause pronounced production of agglutinins, while the same quantities injected into the anterior chamber have lost this quality, and that therefore a purely local infection does not lead to agglutinin formation. It appears that in immunity the same conditions obtain, general infections in most diseases leading mostly to immunization, local infections not (gonorrhea, erysipelas, etc.). Chronic infections are generally local infections, and therefore in them immunity does not appear. After the healing of one focus, another one forms in its neighborhood.

This could lead to attempts to alterate the slow, uniform course of a chronic infectious disease by imitating artificially the course of the acute infections in establishing immunity. As experiments have demonstrated that local infections have no general effect on account of the lack of resorption, the specific causative agents of the chronic infections must be made amenable to resorption, so that an active immunization during the course of such a disease becomes possible. As lately the extent of specificity has been extended even to individual strains of pathogenic microbes, in each case the specific bacillus ought to be utilized. Besides tuberculosis, lepra, actinomycosis, trachoma, suggest themselves as accessible to this method. The author even thinks that a treatment of lepers by the injection of an emulsion of leprous lesions of the same patient is within the range of success.

Although at the first glance Loewenstein's ideas appear somewhat phantastic, they are certainly based upon exact experiments, made also by others, leading to the same result, the demonstration of a local immunization. Wassermann has made interesting reports about this condition in typhoid. In this condition, the gall bladder has become known lately as the main focus for local immunity in animals and man. Very interesting also is the local immunity for vaccinia, limited in the cornea of rabbits (Prowaczek) and rats (reviewer) to the area of the extent of the inoculation surface. Loewenstein's results may be very important for learning to understand the action of tuberculin and its derivatives, together with that of the bacillary substances used for immunization and treatment, down to Behring's latest T. C.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

CESARIAN SECTION.—R. Olshausen (*Zentralbl. f. Gyn.* No. 1, '06.)—This short article of four pages gives an exceedingly clear expose of the present status of Cesarian section. In 118 sections performed in the writer's famous clinic in Berlin the operation was necessitated by the following anomalies: Contracted pelvis in 91; eclampsia in 7; myoma in 6; carcinoma in 4; vaginofixation in 4; nephritis in 2; cardiac lesion in 2; stenosis of cervix and vagina in 2 cases. He considers Cesarian section justifiable in eclampsia whenever very severe convulsions occur very early in labor or before labor really began. Of course, at present the vaginal Cesarian section is given preference. This latter operation was performed on 12 patients (not included in these statistics). In discussing the various indications for Cesarian section the writer mentions the fact that in the United States, authors have recommended the operation also in placenta previa. "In Europe nobody seems to have accepted this indication, which even in America seems to have more enemies than friends. Before long this indication will have disappeared, or—more correctly expressed—will have been forgotten as a blunder."

In speaking of his technique he claims that the placenta can be avoided if one knows that the situation of the placenta can be determined almost positively by the presence of a larger amount of veins in this region of the uterine wall. The direction and insertion of the round ligaments are in this respect valueless. He makes a sagittal incision. He believes that any serious hemorrhage can be prevented if the patient is given a large dose of ergot hypodermically about 20 minutes before operation. The uterine incision is closed with 8 to 12 catgut sutures which are placed within the muscular substance thus avoiding both the decidua and the peritoneum. The latter is then closed by means of a continuous suture, which also passes through the superficial layers of the uterine muscle. No method of suture, no particular suture material will safely eliminate the danger of a uterine rupture in the scar during a subsequent pregnancy.

TWIN PLACENTA WITH A SINGLE AMNIOTIC CAVITY.—Pfeilsticker. (*Zentralbl. f. Gyn.* Dec. 9, '05.)—The publication of two cases of this rather rare condition by Wenczel (*ibid.* No. 32, '05) induced the writer to put another case on record. The two umbilical cords leading to a large common placenta were twisted around each other, but between the cords, on the fetal surface of the placenta, there was a crest of amniotic tissue. This ridge on one place was 5 cm. high and contained two distinct layers of amnion. This crest clearly proves the existence of two separated amniotic sacs in the earlier stage of development, the dividing wall having been torn later.

Metrorrhagia Myopathica.—Brooke M. Anspach (*Am. Jl. of Obst.* Jan., '06.)—Metrorrhagia myopathica is a form of uterine hemorrhage which is independent of the usual causes of metrorrhagia, and is produced by a pathologic condition of the uterine muscle. Anatomically this lesion is not as yet definitely known, but from his investigations the writer is led to believe that finally it may be found in the elastic tissue constituents of the walls of the vessels and the subserous and supravascular layers. A deficiency in elastic tissue may secondarily cause a physiologic lesion consisting of an insufficient contractile power of the uterus. It is, however, possible, that the condition is purely a functional one without any anatomical changes which could be recognized. This disease is unknown in the nulliparous woman, and therefore must have some connection with the child-bearing process. The diagnosis can only be made by positive exclusion of all other causes of uterine hemorrhage. While curettment, atmocausis, etc., have little effect, palliative measures should always be tried before hysterectomy is performed, which is indispensable in some cases of severe hemorrhage.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Concerning the Blood Pressure of Healthy Children.—Oppenheimer and Bauchwitz (*Archiv. f. Kinderheilk.* Vol. 42, p. 415,), in their studies of the subject of blood pressure in childhood, used the three sphygmomanometers most commonly employed at present; the instruments of Basch, Gaertner and Riva Rocci. They conclude that the Riva Rocci instrument is by far the best, that the percentage of error with this instrument is far less than with the others mentioned. They find that Sahli's modification of this instrument may be used both for children and infants. The results obtained while infants are screaming are, however, not trustworthy.

The blood pressure increases with age in childhood. After the ingestion of food, particularly after considerable quantities have been taken, there is an appreciable rise in blood pressure. In infants, the phenomenon is not always noted. The ingestion of large quantities of fluid also raises the pressure. Physical exercise in moderate amount raises the pressure, though in some of the experiments there was no change. Psychical excitement always raises the pressure.

The authors note the fact that their experiments, and the observations of most writers, concern only the maximum or systolic pressure. Observations on the diastolic pressure are as yet not available, in any great number. It would appear, however, that by the method of Strassburger (the details of which may be found in the original article, in the *Zeitschr. f. klin. Med.* Vol. 54) the diastolic pressure may also be recorded, at least in older children, though probably not in infants.

At the last meeting of the German Pediatric Society at Meran, Trumpp

reported the results of his studies of the blood pressure in infants in health and disease. He used the Gaertner tonometer, and as the result of 1300 measurements reached the following conclusions (*Archiv. f. Kinderheilk.* Vol. 42, p. 456): In the waking infant, and in the infant while screaming, the pressure is higher than during sleep. A rise in pressure follows the taking of food. Change of food, particularly the change from breast to bottle, causes a rise in pressure. The normal pressure in infancy is about 80 mm. In bronchitis and pneumonia there is a rise in pressure, comparable to the severity of the lesion. In convalescence the pressure falls. Pus retention increases the pressure. In acute cases, with great loss of the body fluids and of the body weight, there is a fall in pressure. In chronic disturbances of nutrition the blood pressure varies with the condition. Loss of weight usually causes a fall.

Increase in pressure or constancy in the reading, offers an important index, as to whether a gain in weight is due to retention of fluids, or to actual growth.

Adenitic Form of Grippe in Childhood.—Clos (*These de Paris,* 1905, Rev. Mens.) noting the tendency of influenza to attack the mucous membranes, says that it frequently causes adenopathies. The glands of the neck, at the angle of the jaw, and the postpharyngeal glands are most often affected. This adenitis, accompanied by high fever, may constitute the dominant symptom of the malady, or it may develop at the same time as other symptoms. It recalls the clinical picture of glandular fever, which, according to some authors, is always an influenzal manifestation. This adenitis resolves slowly if at all, usually taking from two to six weeks. Often enough it ends in suppuration, and may be the origin of a retro-pharyngeal abscess. The prognosis is however good in the majority of cases. Prophylactic treatment consists in the care of the oral mucous membranes.

Congenital Laryngeal Stridor.—Koplik (*Archives of Pediatrics,* Dec., 1905,) reports a typical case with autopsy findings. He is unwilling to accept the theory that the symptoms in this condition are due to enlargement of the thymus. He points out that enlargement of the thymus is found in many diverse conditions, that absolute proof of its causal relation to the condition under discussion is still wanting. For the same reason, the author does not accept the theory of Thomson and Turner, that the condition is due to a disturbance of the co-ordination of the respiratory movements, probably due to some developmental backwardness of the cortical centers which control them. He believes that the condition is due to an anomaly of the epiglottis and larynx. The autopsy findings in his case showed the condition which has been described by Lees and Refslund in their cases of congenital laryngeal stridor. The epiglottis was curved backward and lay over the superior opening of the larynx. The lateral borders of the epiglottis were in contact. The arytenoepiglottic folds were almost in contact. The aditus laryngis was thus much narrowed and deformed. There was no membrane, no inflammation or swelling, no cicatrices, either above, on, or below the cords. The thymus was found to be large, weight 25 grams, but the author does not think that this condition can be held to explain the lesion. By a

curious coincidence, Ballin, in the December, 1905, number of the *Jahrbuch f. Kinderheilk.*, also discusses the question of a congenital laryngeal stridor. In five cases carefully studied, there was no evidence of hypertrophy of the thymus in three. He holds that such hypertrophy cannot stand in etiological relation to the syndrome. As a result of autopsy findings, in both of which there was abnormality of the larynx, the author is inclined to the belief that the mechanical theory of the production of the condition is the correct one, though he admits that a disturbance of coordination of the nervous mechanism of the larynx may antedate anatomical changes.

ORTHOPEDICS.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

PAGET'S DISEASE, CONCERNING ITS PROBABLE SYPHILITIC ORIGIN.—Emile Auffret (*Revue d'Orthopedie,* Nov., 1905).—The author reports a case of a man of forty-five years, who presented deformities absolutely typical of Paget's disease. A careful study of the man's past history and of his hereditary history inclines the author to the opinion that there is certainly reason to suppose that hereditary syphilis, or acquired syphilis, were present and were influential in the production of the deformities in this case. He refers to the opinion expressed by Lannelongue in 1903, that Paget's Disease may be seriously regarded as one of the parasyphilitic affections. Fournier also agrees in this opinion, and says that to his mind Paget's disease will undoubtedly one day be classed with tabes, general paralysis, and other late manifestations of syphilis. He has reported two cases, where there was no doubt of an association between Paget's disease and hereditary syphilis. The author suggests that in each new case of Paget's disease, minute research be made in order to discover the probable presence of syphilis in the antecedents of the person affected.

SHOES AND FEET.—Robert Soutter (*Boston Med. and Surg. Jour.*, Jan. 11, 1906).—A very large proportion of trouble with feet is caused by shoes. The best shoe that can be bought will affect the foot, to a greater or less degree. What can be done to prevent these marks of abuse which, when age comes on, make walking such a burden? Numerous experiments have been made by shoemakers, associated with medical advice, tending towards the production of a shoe which will not injure the foot. The orthopedic lines laid down for the making of such a shoe apparently do not agree with the practical points necessary to the shoemaker who is to manufacture the shoes. In consequence, shoes have been made, and put upon the market, for which the shoemaker had obtained the endorsement of a number of physicians in Boston and New York. The shoes were advertised broadcast, and came into use. The lasts were then thrown away, and a practical shoe, from the shoemaker's

standpoint, substituted, using the same advertisement. The author points out that the chief fault of the present method of shoemaking is that the shoe is made for an astragalo calcaneous valgus. These shoes have a constant tendency to produce abduction of the front of the foot, and to cause hallux valgus. A desirable shoe should present the following qualities: the heel should not be higher on the outside; there should not be a stiff shank, and tight vamp seam combined; nor should there be a slanting, long, stiff counter. Free play of the toes should not be limited by the width of the front part of the shoe, or by a tight vamp seam, or stiff shank; by a tight upper or a high heel. In order to make the foot admired, it must be held in a position of strength, have the appearance of health, and be free from signs of abuse. This brings up the point of the wearer, who in a measure should be considered. He will persist in wearing French-shaped shoes as long as public opinion persists in the idea that this sort of shoe is the best looking. However, when his feet are lame, he must be willing to wear a shoe not conforming to style. It seems perfectly possible to smuggle in some sense, so that the unsuspecting shoe buyer will be spared future lameness, due to shoe deformity.

Open Air Treatment of Bone Tuberculosis at the Wellesley Convalescent Home (With a list of 30 perfectly cured cases).—E. H. Bradford (*Boston Med. and Surg. Jl.*, Jan. 20, 1906).—In the minds of many there remains a belief that even where an apparent cure has been obtained in the treatment of bone tuberculosis, the patient nevertheless remains doomed to a life of disability, poor health or early death, due to some underlying constitutional vice. The author points out the error of this opinion, and reports a large number of cases of Pott's disease and hip disease, which were in the majority of cases treated at home, that have recovered entirely and are leading useful and active lives. As to the open air treatment of these conditions, he mentions the experiment which was necessitated at the Convalescent Home, by the destruction by fire of its buildings. This occurred three years ago, in the midst of a very rigorous New England winter. The children were placed in shacks, which had free opening to the outer air. It was found that their general condition, as well as their local condition, began to improve immediately. He believes that this success should stimulate efforts for the treatment and control of joint and bone disease by open air treatment. When one reads the accounts of sanitary conditions of large cities of antiquity and the middle ages, when people were crowded in huts littered with unchanged straw, with filth plastering the streets, and with no disposal of sewage, the virulence of epidemics which almost depopulated Europe is explicable. In the future, the present condition of our cities, where the majority of the population spends the greater part of their lives in rooms polluted with what may be termed atmospheric sewage, will be looked upon with the same horror by a generation to whom the White Plague will be as unknown as the Black Death or terrible ravages of small-pox are now to us.

A Report of Seventeen Cases in Open Air Treatment for Surgical Tuberculosis in Children.—John D. Adams (*Boston Med. and*

Surg. Jl., Jan. 20, 1906).—All of these seventeen cases showed diminished hemoglobin and general conditions very much below par, manifested by loss of flesh, indifferent appetite, lack of energy and absence of satisfactory improvement in local condition; those with abscess formations showing the characteristic of persistent sinus, with profuse discharge. Their ages ranged from four to twelve years. These cases were exposed to a temperature ranging from 5 below zero to 20 degrees, and were kept constantly out of doors. As a result, it was noted that there was immediately a rapid increase in weight, one case gaining 16 pounds in two weeks. The average gain in both weight and hemoglobin was marked; in fact, every case showed the most gratifying results as to appetite, color and activity, and in one case a persistent sinus closed completely, and remained so.

A New Method of Operating on Dupuytren's Contraction of the Palmar Fascia.—W. W. Keen, Philadelphia (*Amer. Jour. of Med. Sci.*, Jan., 1906).—The nodules and pits were so diffused over the palm in this case that it seemed impossible, by excision in the axis where later the bands of contraction would develop, to remove the contracting tissue. The author began his incision at the ball of the thumb, on a line with the interspace between the forefinger and middle finger, went down almost to the web between the forefinger and middle finger; then transversely to a point just above the web between the ring and little fingers; then up to the ball of the little finger, at a point corresponding to the beginning of the incision on the other side of the hand. This flap was dissected backwards from the transverse incision, and the dissection was carried down to the sheaves of the tendons. The palmar fascia was then dissected away from the under surface of the flap. The whole of the flap bled freely. The fibers going to the index and middle fingers were reached by undermining the skin overlying them. Union took place by first intention, and the patient was discharged from the hospital with normal motion of her fingers. The author thinks that this method of operating on the palmar fascia is desirable in more advanced cases, where there are distinct bands already formed.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Case of Myasthenic Paralysis—Boldt (*Monat. Psychiatrie u. Neurologie*, Jan., 1906.)—This is a report of a case of myasthenia gravis with autopsy findings. Such cases are so rare that each one is worthy of careful attention. This case is that of a man aged thirty years. At the time of the first examination the symptoms which were most prominent were weakness, difficulty in swallowing and in speaking, on account of the great muscular fatigue. As the case progressed the typical symptoms developed in the way of attacks of dysponœa, inability to swallow

food, etc., and great weakness. The patient died in an attack of choking. At the autopsy there was an absolutely normal finding in regard to the internal organs. The nervous system showed nothing abnormal except a quantity of minute hæmorrhages scattered throughout some of the nuclei of the cranial nerves. The author is inclined to agree with Oppenheim, who interprets these as the result of the frequent attacks of choking and are mechanically produced. In the muscles were found in places the cell infiltration of which Wigert among others has written about. The author does not attempt to explain the process from the meager post-mortem findings. This case can be set down as a very typical case of myasthenia gravis.

Muscular Atrophy of the Aran-Duchenne Type of Syphilitic Origin—Lannois (*Nouvelle Iconographie de La Saltpetrire* 5, '06.)—The role of syphilis in the causation of muscular atrophies has been much disputed until Raymond in 1893 reported two cases, one with autopsy in which the specific origin was not to be disputed. In the case here quoted the syphilitic history is not in doubt. A man aged 47 years developed an atrophy of the muscles five years after the primary infection. The type of the atrophy was a typical Aran-Duchenne, with, however, a surprising retention of muscular strength. Under an anti-syphilitic treatment with subcutaneous injections of mercury, a very marked improvement was obtained. The author takes this occasion to emphasize the importance of treating syphilis of the nervous system by the injection method and not to waste time by inunctions and internal medication.

A Special Form of Amaurotic Family Idiocy—Spielmeyer (*Neurol. Cent.* No. 2, '06.)—This is a valuable contribution to the clinical and pathological data of this disease. The cases reported in this paper were all of the same family and were characterized by the following typical symptoms: A rapidly developing dementia in previously normal children; the family nature of the disease; with the beginning of the dementia in all four children a progressive retinal atrophy of the type of retinitis pigmentosa that is without the pigment. One of these cases was studied post-mortem and very peculiar and previously undescribed cell changes were found, which point to a primary cell process as the etiological factor in this disease. On account of the unusual cell changes which were found, the author believes that these cases should be given a separate place in the classification of the family idiocies. He apparently does not consider them to be of the amaurotic family idiocy to which the name of Sachs or Tay Sachs has been given.

A Study of the Larynx in Tabes—Greene (*Boston Med. and Surg. Journal*, Jan. 4, '06.)—On account of the results of examination of the larynx of sixty cases of tabes with the view of obtaining data on the proportion affected, the nature of the disturbance and the period of occurrence in the course of the disease. Fifteen per cent. showed pharyngeal complications. The only form of paralysis observed was abductor paralysis. Six cases were found, five were unilateral and one bilateral. The laryngeal symptoms are among the early symptoms of tabes.

Sudden Deaths in Tabes Dorsalis—Hirschberg (*Neurol. Cent.* No. 1, '06.)—Goldflam published a paper in which he analyzed the cause of death in tabetics and called attention to the fact that in a certain percentage of cases there is found arterial disease as well as heart conditions in which sudden death is frequent. This fact should always be considered in the prognosis which is given to these patients. Hirschberg recounts a case of sudden death in which there was no heart lesion and no frank arterio-sclerosis. He suggests as a possible explanation for this case the existence of bulbar symptoms due to an arteriosclerosis in that region. This observation is of value as suggesting a possible explanation of some of the circulatory disturbances in tabes in which there is found no sufficient evidence from the clinical examination.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. Johnson, M. D.

The Roentgen Method as a Guide in Operating for Lithiasis of the Urinary Tract.—Carl Beck (*Jour. A. M. A.*, Dec. 23, 1905.)—Whenever errors have been committed in diagnosing lithiasis of the urinary tract, they were of the individual and not of the method. Skiagraphic technic is so much advanced today, that it stands in no need of the imagination. A definite diagnosis in suspected lithiasis can be made. It is of much importance to bring the calculous area as near to the plate as possible, and to keep the field absolutely quiet. These two requirements are attained by the use of a tubular diaphragm, which offers another great advantage, that of permitting the passage of the focal rays alone, excluding those rays which emanate from the tubal wall. The disadvantage of the tubular diaphragms is that only small areas can be shown at a time. It is evident, therefore, that in skiagraphy of the urinary tract a general exposure must precede that of a limited area, since it cannot be known beforehand whether the suspected calculi were situated in one or in both kidneys, or in the ureters. The author gives in detail his *modus operandi* in renal skiagraphy of the urinary tract.

His experience with the Roentgen method has suggested to him that it is invariably necessary to skiagraph the renal regions whenever vesical calculus is suspected. Since he has made this a principle, he has found renal calculi whenever there was a concretion in the bladder. This is not strange, if we realize that most vesical calculi were originally formed in the kidneys.

Four interesting cases are cited.

Contribution to the Surgery of the Prostate Gland.—Barker (*N. Y. M. J.*, Dec. 10.)—It is the physician's duty when he is called to relieve a patient's first retention, in cases of prostatic hypertrophy, to first use the catheter and relieve his patient, and then and there to im-

press upon him the necessity of the removal of the gland as quickly as the patient can get to the hospital. It is also his duty to return to his patient every eight hours and draw the urine until the patient goes to the hospital. The old practice of putting the catheter into the hands of the patient and teaching him its use should be condemned. The reasons for this are: The patient at this time is usually in vigorous health. He has not been poisoned by the absorption of residual urine. His bladder is in a healthy condition, not having been infected by uncleanly catheterism or in any other way. The patient is in such condition that prostatectomy is to him a benign operation, and in a few weeks he is able to go about his duties, free from disturbing urinary troubles. Should the physician fail to advise properly at this time, he has lost his opportunity and can do little but harm. The patient having learned to use the catheter, and the obstruction to the flow of urine being due to an acute congestion added to a chronic hypertrophy, in a more or less short time, the acute condition subsides, the flow of urine is again restored, and the patient believes he is cured. The trouble, however, recurs at some subsequent exposure. The physician is not called. The patient knows how he was treated before, and resumes the use of the catheter. The slowly growing hypertrophy of the prostate, hastened by the acute congestive attacks, becomes so great that it occludes the urethra all the time. Catheter life becomes continuous, infection of the bladder invariably follows sooner or later. Cystitis, with all of its torments, harasses the patient until physically and mentally wrecked, a subject for commiseration, he seeks surgical aid, or perhaps now for the first time is advised to do so by his physician. It is a compliment to surgery that it restores to health and comfort a very large percentage of these patients even at this time.

Thirty cases with one death are reported. The author operates by the inverted-U incision and has devised a tissue crushing forceps, for separating the prostatic adhesions, and a tractor.

Operative Treatment of Tumors of the Bladder.—Watson (*Ann. Surg.*, Dec., 1905.)—The author proposes to substitute bilateral lumbar nephrostomy with ligation of the ureters and the establishment of renal fistulæ in cases of bladder tumor for ureteral implantation in connection with bladder resection or total extirpation, and that the bladder operation be done after an interval and not together with the nephrostomies. After reviewing the reported cases he says the sum and substance of other operative treatment up to the present time may be stated thus: If the operative deaths and rapid recurrences are combined under the one heading of operative failures, such failures are seen to have occurred in 28.6 per cent. of benign tumors, exclusive of myxoma, and in 46.0 per cent. of cases of carcinoma. The causes of the high mortality and of the frequent recurrence that have been shown, seem to be in a large measure due to the failure to operate soon enough and radically enough in cases of benign as well as in those of malignant tumors, and to the defects inherent in ureteral implantation. This points to the necessity of more radical measures in benign as well as in cases of malignant tumors, if we are to hope for better results. In inoperable bladder cases the nephros-

tomy could be utilized for relief that might be expected to result from diverting the urine from the bladder.

In suitable cases total extirpation of the bladder is to follow the nephrostomy one month or so later. In extirpating the bladder the writer suggests that the organ be approached first from the perineum, making the customary incision for separating the rectum from the prostate and then opening the peritoneum suprapubically and removing the bladder unopened through this cut, a procedure which offers so much greater facility for accomplishing the extirpation of the structures involved and secures much greater thoroughness than if the operation is undertaken extraperitoneally.

SOME NOTES UPON THE TREATMENT OF TUMORS OF THE BLADDER.—Wallace (*Amer. Jour. Urol.*, Dec., 1905.)—From personal experience of tumors of the bladder, the author offers the following conclusions:

1. In all cases of hematuria examine the bladder cystoscopically as early as possible. Symptomless hematuria is, in the majority of cases, the first symptom of vesical tumor, and early diagnosis may mean the removal of the disease at a favorable stage in its growth.

2. Pedunculated tumors are not more favorable for treatment than sessile implanted tumors of a similar nature.

3. Removal of the tumor in a certain proportion of cases can be complete, and recurrence does not take place.

4. Even if recurrence does occur the disease is delayed in its progress. The patient for a time is relieved from distressing symptoms and life is not only prolonged, but it is prolonged in greater comfort.

5. Operation should be delayed, in cases unfavorable for cure, until the symptoms are so severe that the patient's life is rendered very unpleasant and his health suffering.

6. Suprapubic drainage causes the hemorrhage to cease and by a diminution of the distressing symptoms—frequency and difficulty of micturition—makes the patient much more comfortable and prolongs life. Permanent fistulæ can have apparatus so fitted that distress from leakage of urine is almost entirely obviated.

7. Operation in the later stages of the disease, when sepsis is present and the symptoms are aggravated, and the patient suffers from toxic absorption, gives great relief.

8. In all cases of vesical tumor, whether the operation be curative or palliative in its object, the suprapubic route is the best to adopt.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

THE TREATMENT OF PAPILLOMATA OF THE LARYNX.—Koellreuitter (*Monatsschrift fuer Ohrenheilkunde,* Jahr XXXIX, No. 11) reports in detail two cases of papillomata of the larynx in which the surgical re-

moval of the growths was followed by recurrences. In the first case that of a man aged 31, the growths had been removed twice within a month's time. The third removal was followed by the internal administration of Fowler's solution with the result that a laryngoscopic examination fourteen days later revealed no sign of any recurrence. A week later the patient was discharged as cured. The result was permanent. In the second case, a child of 5 years, a papilloma was removed under chloroform anesthesia by means of direct laryngoscopy. A recurrence quickly followed. The child was then given Fowler's solution. In spite of this the growths recurred in number and size. The growths were again removed and potassium iodide given instead of the Fowler's solution. This was continued for a number of months. The larynx gradually assumed a normal appearance and the child has now a good singing voice.

A Characteristic Symptom of Purulent Thrombosis of the Superior Longitudinal Sinus. — Gradenigo (*Archives fuer Ohrenheilkunde,* Band, 61; Heft, 3 and 4) believes that the occurrence of a painful fluctuating swelling on top of the head near the middle line corresponding to the foramina emissaria Santorini in the posterior portion of the saggital suture, to be characteristic of a thrombosis of the superior longitudinal sinus. This swelling may contain blood or pus and granulations. The author cites briefly eleven cases reported by others in which the thrombosis of the superior longitudinal sinus followed suppurations of the middle ear and describes in detail a case observed by him. The case was that of a woman aged 31, who came under observation in July, 1904, with a history of acute ear trouble in April of the same year, which had received no treatment. A swelling had appeared back of the ear which opened spontaneously. There was a small granulation at a point over the tip of the mastoid with a fistulous tract extending upward for a distance of 3 cm., but no necrotic bone could be felt. The hearing was normal and the drum membrane was not perforated, but had lost its normal lustre. The cervical lymphatic glands on both sides were enlarged. There was a painful fluctuating swelling at the vertex of the skull. There were severe headaches, especially at night. The patient was given potassium iodide, but no relief followed. The swelling was opened and found to contain pus and granulations. The bone was necrotic and a piece of bone about the size of a two-franc piece was removed. The dura was covered with granulations. An opening was made into the dura and a probe inserted which revealed a thick, creamy pus. The dura was freely incised and the sinus opened. This was found to contain no blood, but was filled with a thrombus. This thrombus was not removed, because the patient had no rise of temperature. The wall of the sinus was removed and the wound packed with gauze. The patient died nine days later from a general liptomeningitis. The post-mortem findings revealed a thrombus of the right lateral sinus extending into the superior longitudinal sinus. There was an oval defect in the temporal bone at the knee of the lateral sinus which communicated with the mastoid, which contained a number of cells filled with pus. The mastoid antrum and middle ear were normal.

Post-Operative Hemorrhage Following the Removal of the Pharyngeal Tonsil.—Dupuy (*Laryngoscope,* Jan., 1906).—Excessive hemorrhage following the removal of the pharyngeal tonsil, or so-called adenoid, has not been, according to the author, accorded the deep consideration it really deserves from writers of text-books. Dupuy was able to find reports of thirty-eight cases of alarming hemorrhage following adenectomy, eleven of which were fatal. A few cases had been reported to him personally. Compared to the great number of adenectomies performed, the fatal results appear to be few. This, he believes to be due to a failure of reporting the fatal cases. This is undoubtedly the case. (The reviewer has received personal reports of two fatalities which had occurred within six hours after the operation, which have not been reported.) The different causes of hemorrhage are discussed, such as hemophilia, struma, lymphadenoma, exophthalmic goitre and the various forms of anemia. Among the local causes are abnormal distribution of the arterial blood supply, malpositions of the ascending pharangeal artery, have been observed. In one case reported by Schmiegelow a malposition of the internal carotid artery led to a fatal issue. Dupuy is inclined to believe there is more danger of hemorrhage occurring when no general anesthetic is employed than with; there being more liability to instrumental injury. In the great majority of cases the bleeding occurred within twenty-four hours after the operation. In one case, death occurred on the eighth day after operation. The internal administration of calcium chloride a few days before operation will markedly lessen the tendency of bleeding in the hemophilic. The dose recommended is 30 grains as the initial one and five grains every hour until five or six doses are taken. This treatment should not be kept up for more than three days, for if too much of the drug is given the blood loses its coagulating properties. Much can be done to minimize the risk of bleeding by enjoining enforced rest in bed for twenty-four hours after operation. The giving of cold drinks and chipped ice should form a part of the post-operative treatment.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Contributions to the Study of Urticaria Pigmentosa—E. Graham Little (*Brit. Journal of Dermatology,* Jan. 1906.)—After comprehensive study of his own, and all the reported cases of this disease, the writer believes it justifiable to draw the inference that there is a general tendency, probably congenital, to over-production of mass cells in the skin of patients suffering from urticaria pigmentosa and that the local excessive accumulations of these cells can be caused by various accidental phenomena. The manner of the infiltration of the mass cells suggests a close relation with blood changes and certain examinations in these cases brings them somewhat into line with the results obtained in the class of blood diseases including hemophilia, pernicious anemia and lymphadenomata.

A Contribution to the Hyperkeratoses—F. Berring (*Archiv. f. Derm. und Syph. Bnd. LXXVI., Hft.* 3, 1905.)—That hyperkeratosis congenitale and ichthyosis cannot be sharply separated, led the author to this work. In hyperkeratosis he finds that there is no structural change in the sebaceous glands but that their numbers bear a direct relation to the thickness of the stratum corneum. No explanation for this is found. The hair follicles are the most altered and contain no hairs. In ichthyosis there is a sclerosis of the corium, the coil glands and the sebaceous glands are reduced in number, also the hair follicles, which do not show hairs. The horny layer is thinned.

A Case of Acute Septic Pemphigus—J. W. Crary (*Journal Cutaneous Diseases,* January, 1906.)—The patient was an infant born after prolonged labor. The third day after birth the temperature of the infant rose to 104° and then fell below normal. The physical signs were normal and the skin normal. Two days later an eruption of vesicles appeared over the cheek and about the angles of the mouth. As there had been a case of impetigo in the same ward, this trouble was thought to be of that nature, but did not improve under treatment. The eruption of the vesicles extened over the face, neck and chest, and became larger. Some of the bullæ were very large and broke, leaving denuded areas. Death took place on the twenty-third day of the child's life, twenty days after the rise in temperature and eighteen days after the appearance of the eruption. The temperature throughout the sickness was irregular. Autopsy showed small areas of bronchopneumonia in both lungs, heart normal, lymph nodes and peritoneum normal, spleen congested, fatty infiltration of the liver cells, kidneys large, soft and red, with degeneration in the cortical tubes; suprarenals were normal, umbilicus normal, but in a fusiform dilation of the partially obliterated left hypogastric artery was discovered a circumscribed collection of pus to the amount of about half a dram. Cultures from the blood in the vessels of the general circulation gave the staphylococcus pyogenes aureus; from the liver and from the spleen, the staphylococcus aureus and albus; and from the little abscess, the staphylococcus albus and aureus.

Lichen Planus and Vitiligo.—M. Delos (*Annals de Derm. et Syph.,* December, 1905.)—The writer describes a man of 60 years who has had for a long time plaques of lichen planus accompanied by disseminated spots of vitiligo. The co-existence of the two maladies is curious. The relative frequency of their co-existence is insufficient to draw any conclusions and does not throw any light upon the etiology of either affection. M. Delos in the same number publishes a case of lichen obtusis and vitiligo occurring coincidentally upon the same individual. These observations are exceedingly interesting and deserve a careful histological study of the skin. In the latter case biopsy was made which will be reported later.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

MENINGITIS FOLLOWING EXCISION OF THE EYEBALL.—C. Devereux Marshall (*Ophthalmoscope*, Dec., 1905.)—It is probable that the majority of ophthalmic surgeons hold to the view that the removal of a suppurating globe is a procedure more than likely to give rise to a meningitis, and hence practice simple incision of the globe in order to let out what will come away of its own accord, reserving enucleation until after the acute symptoms have subsided. This method is claimed to insure exemption from meningitis.

The opponents of this practice, among whom Marshall may be considered the foremost, hold that incision into suppurating material within the eyeball does not render it any the less septic. In cases thus treated pus may soak back and infiltrate the orbit, giving rise to septic venous thrombosis, septic meningitis and pyemia. It cannot be denied that allowing a mass of pus to remain in such close relation to the meninges is hardly justifiable on general surgical grounds.

Early operation, i. e., as soon as suppuration is well established, gives the opportunity of removing the abscess sack intact. In order to obviate the chance of infecting the orbit in removing suppurating globes in a later stage, Marshall advocates a preliminary evisceration and the application of strong carbolic acid to the interior of the globe. He maintains that patients that die from meningitis after excision do so because the eye was left long enough to produce the disease before it was removed, and cites cases where meningitis followed panophthalmitis in an unoperated eye.

A CASE OF AMAUROTIC FAMILY IDIOCY, WITH A SUMMARY OF REPORTED CASES.—M. Frank (*Jour. A. M. A.*, Jan. 20th, 1906.)—Frank's case presents the well-known clinical picture of this rare disease. The trouble begins in the early months of life as a progressive muscular weakness, principally of the muscles at the back of the neck. At the same time there is evidence of diminution in vision. Hearing becomes hyperacute so that the child is disturbed by the slightest sounds. Mental development ceases. The outcome is invariably fatal. One curious fact is that all but six of the recorded cases have occurred in Jewish children.

The ophthalmoscopic picture is that of a post neuritic atrophy of the optic nerve. The changes at the macula are pathognomonic and consist of a nebulous greyish white area two to three times the size of the optic disk and slightly raised above the surface of the retina. In the centre, at the site of the fovea, is a dark red or liver-colored spot, clear cut in outline.

Holden's histological examination of Hirsch's case showed degeneration of the ganglion cells of the retina and of the nerve fibres of the optic nerves and tracts, a finding which has recently been confirmed by Shumway.

Euphthalmin Conjunctivities.—C. J. Kipp (*Ophthalmology*, Jan., 1906.)—Kipp prescribed a four per cent. solution of euphthalmin hydrochloride twice a day for an old man with central corneal opacities whose vision was greatly improved by moderate dilation of the pupil. There were no unpleasant symptoms for four weeks, when occurred swelling of the lids, pain in the eyes, and muco-purulent secretion. On stopping the drug for a week the conjunctival trouble greatly improved, but at once got worse on resuming its use in two per cent. solution. Kipp found both lids edematous and covered with dried crusts, much dried secretion entangled in the cilia and a swollen conjunctiva covered with enlarged follicles. Investigation at the dispensing pharmacy proved that the solution was really euphthalmin (and not atropin, as Kipp suspected). Bacteriological examination negative. Prompt recovery under a zinc sulphate collyrium and zinc oxide ointment.

The Giant Magnet.—John Wharton (*Ophthalmic Review*, Dec., 1905.)—This paper embodies the results of an extensive experience at the Manchester Royal Eye Hospital. The writer considers the question under headings as follows: A. *The time intervening between the accident and the operation for removal.* The best results are obtained in those cases operated upon within twenty-four hours. After this period the foreign body becomes surrounded by a plastic exudate which seriously interferes with removal. In cases operated upon after days or weeks, the excessive traction required militates against a good result and may lead eventually to phthisis bulbi. B. *Situation of the wound of entry.* (1) In the cornea: When the fragment has lodged in the lens it can be readily removed and the final result as regards the integrity of the globe and vision is excellent. If it be in the vitreous or posterior coats, enucleation may be necessary on account of the development of iridocyclitis or the impossibility of dislodging the fragment. Removal by scleral puncture is deemed best when the metal has been some time in the eye. (2) In the ciliary body or farther back: These cases yield uniformly good results, which the author attributes to early operation, perfect asepsis, the insertion of a conjunctival suture, and, finally, to the fact that the wound of entrance is clean cut. C. *Septicity of the wounds.* The metallic chips themselves are generally aseptic. Infections come from subsequent bacterial invasion along the track of the wound or are introduced at the time of operation. From this point of view, the giant magnet has many points of superiority over the hand magnet, as the armature of the latter may have to be introduced into the globe and the probing may so disintegrate the vitreous that it furnishes a good culture-medium for germs.

Suggestions in using the giant magnet: (1) In recent cases with an open wound remove the metal through that wound. (2) When the original wound has completely healed, endeavor to draw the foreign body into the anterior chamber through the circumlental space, whence it may be easily removed. If this fails, (3) make a large corneal flap, when it will probably be found easy to remove the metal.

SOCIETY PROCEEDINGS.

ST. LOUIS SURGICAL SOCIETY.

Meeting of November 15, 1905.

TRANSFUSION.

Dr. Walter B. Dorsett read a paper with the above title, for which see page 217.

DISCUSSION.

Dr. Glasgow thought there could be but one opinion in regard to the utility of intravenous injections. The case of Dr. Dorsett's which resulted fatally, reminded the speaker of a case in which he had removed the cervix for cancer. The woman was transfused and the legs tightly bandaged, about 2,700 cc being injected in several seances. During the last injection she complained of pain about her heart, and the bandages were removed from the legs; the pain then disappeared, proving, the speaker thought, that it was a case of over-filling of the heart. She made some improvement, but died several days afterwards of tetanus. This was the only case in which he had ever seen any evidence of over-filling of the heart. In regard to giving the patient water before operation, he said this had been his practice for a good many years, and he rarely saw any severe vomiting after anesthesia. As a routine method he would not give intravenous injections, because he believed the same result could be obtained by the saline solution introduced into the rectum.

Dr. Tupper said he had noticed two things which seemed to indicate that the requisite amount of fluid had been carried into the vein. After a sufficient amount has been given the patient often becomes restless, nervous and excitable. These signs he had accepted as evidence of sufficient flow. The other indication was excessive diaphoresis. He said there could be no doubt of the great benefit obtained by intravenous injection of saline solution. He mentioned a case seen with Dr. Orr, in which the patient had taken twenty grains of strychnia sulphate by the mouth and was beginning to show the physiological effect and having typical convulsions. He immediately opened the median basilic vein and bled the patient copiously and then transfused. After that she had no more convulsions and her general condition became normal. He also administered apomorphia hypodermically simply to empty the stomach. With this exception, the bleeding and transfusion constituted the only treatment. In a few days the patient was entirely well.

Dr. Dorsett, in closing, said he had chosen to present this subject chiefly to popularize transfusion, as he thought it is not resorted to often enough, being put off till the last thing, when it is too late to do permanent good. One reason for this probably was because it was much easier to inject into the mammary gland, and general practitioners seemed afraid to undertake the intravenous transfusion. The addition of adrenalin in one desperate case, he believed, contributed to the successful outcome, the adrenalin seeming to have a stimulating effect upon the heart and acting upon the peripheral nerves.

ST. LOUIS SURGICAL CLUB.

Meeting of January 10, 1906.

TRAUMATIC DIPLEGIA.

Dr. Wm. S. Deutsch read a paper on this subject for which see p. 227.

Discussion.

Dr. Morfit: The case affords an interesting study, and especially instructive, inasmuch as the operative treatment had more than ordinarily carried out the effect it was intended to produce.

The question arose as to whether the pressure, as no doubt it was a pressure trouble, was due to the cranial or cerebral condition. The traumatic depression in the skull was made out before the operation and led to the very logical conclusion that it was in some way connected with the diplegia, but at the operation another pathological factor presented itself. After the cranial depression was removed by trephining, a cyst-like body was found immediately beneath. When this was cut into, it spurted out blood, and if I gather the essayist's meaning there was considerable hemorrhage, although it ceased spontaneously upon the application of a slight pressure.

Now was this cyst really a cyst or an off-shoot from one of the cerebral sinuses, or was it confined blood, or blood mixed with mucin, or simply blood-colored cyst contents? The size and the situation of the cyst was enough to account for the diplegia without the presence of the cranial depression. It would have been interesting to have had an exact diagnosis of this bloody fluid. In the absence of this, I do not feel that we can positively conclude that this was a cyst and was not a dilatation or an off-shoot from a sinus containing circulating blood. The cranial depression was either the direct or the indirect factor in producing pressure. However, the cyst-like body was in all probability the permanent factor which maintained the pressure, and the cranial depression was not an active factor in keeping it up.

Such argument is only of value in the scientific relation. Practically both the conditions had pathological relation with the peripheral manifestations and it would have been as impossible as irrational to have removed the cyst, as we may call it, without correcting the cranial deformity. Intense headache was cured and this of itself warranted the operation. Added to this was the very gratifying improvement in the patient's ability to handle himself. I believe absolutely in the generally accepted routine cranial examinations in the presence of the large majority of all scalp wounds. At the same time, however, if we discover a linear fracture of the outer table, we can suppose that the inner table is depressed, as in a large number of instances it has been proven. Then in the absence of pressure symptoms we must watch and wait, as it is not yet conceded that all linear fractures must be trephined.

I call to mind a case sent to my service at the Mullanphy Hospital in which I performed a laminectomy for a double injury in the dorsal spine, causing paralysis from the thorax down. After operating on the back, a scalp wound was enlarged and a linear fracture found in the outer table of the posterior portion of the parietal bone. In the presence of consciousness and the paralysis due to the spinal injury, no localizing brain pressure could be inferred. The case came to autopsy and on examining the cranium, a dispute arose as to the correctness of my observation in diagnosis of a linear fracture. I was opposed by several of the other observers and I myself felt that I was not quite as sure from the post-mortem appearances as I had been at the time of the ante-mortem examination. Examining the interior of the calvarium a very evident depression of the inner table was made out, but no special injury to the brain at that point and no other cranial fracture. However, the brain was dotted everywhere with blood clots, which

no doubt resulted from the general concussion of the brain itself with no special relation to the local trauma in the parietal bone.

It was strange that this large, able-bodied, strong man should have come to his death in this manner, because when we examined the kidneys we found them completely cystic without, from the gross appearance, a cubic inch of normal renal tissue. Yet his relatives assert that he had not recently been ill and had worked steadily, and the only symptoms that they described that might have led to renal investigation was occasional intense headache and nausea.

Dr. Kirchner said many scalp wounds and fractures are met with at the hospital, and the discussion would be a long one, if any effort were made to take up all phases of the subject.

The patient in these cases may be normal when first seen, but the next day the whole picture may be changed. By trephining, a subdural or epidural clot is found which, if allowed to remain, will result in a condition such as Dr. Deutsch found in this case. There may be an extensive injury to the inner plate, while the outer plate is nearly normal. The blow or injury might be on one side, and the actual injury be on the opposite side. Such a case had been sent to the medical division a few days ago and the doctor diagnosed it as a case of injury to the middle meningeal artery. The injury was on the right side, and the symptoms pointed to trouble on the left. Injury to the brain and its membranes by contre coup is quite frequently met with, and this fact should be kept in mind.

As a general rule all of these cases should be explored.

Dr. Reder said he could not discuss the paper as he would like to do because all of his cases had been brought to operation within a couple of hours after the accident.

The college teaching of his time was to let a depressed fracture alone unless it caused symptoms that could be directly attributable to it. That would hardly be done now. The bone in a depressed fracture should be elevated and that as soon as possible. The speaker mentioned the case of a man who had complained of headaches and had threatened to commit suicide. The case came to operation, a button was taken out about an inch in diameter, and conditions found such as Dr. Bartlett had described. He requested Dr. Deutsch, in his concluding remarks, to give further information in regard to the nature of the adhesions and the character of the walls that constituted this cavity.

In closing, Dr. Deutsch said there was a decided improvement shown in the patient's subsequent history, besides the entire relief from the headache. He got around better than before operation, having been so crippled that he could scarcely walk, had no control over the muscles and no strength in them. The case is one that precludes the chance of giving his muscles any very great improvement because of the operation having been twenty-one months after the injury. Those who saw him, however, feel that he undoubtedly got a better use of his extremities. An important benefit is that the man feels that he now has something to live for.

In regard to the cyst, he was in doubt as to its pathology, not having had opportunity to make any microscopical examination. It is easy to decide on these things if a pathological specimen can be taken home and examined, but he was unable to do that in this case. At first he did not know but that he had cut into the longitudinal sinus. The mass was right under the dura. It contained perhaps two tablespoonfuls of blood and serum. He could not positively say what the lining of the cyst was, but it showed that the condition was the result of a pathological process and not of anything normal, and was doubtless responsible for some of the symptoms and signs.

It was the speaker's belief that this patient should have been operated upon on the other side also, but the patient had received benefits on the right side as well as on the left, although the operation was entirely confined to the left. This point has been noticed by others in watching these cases after operation.

Meeting of November 8, 1905.

Osteitis Deformans.

Dr. M. B. Clopton read a paper on the above subject, for which see page 223.

Discussion.

Dr. Allison said that confusion of this condition with syphilis was very often made and possibly many cases were diagnosed syphilis because of the changes in the tibia. The value of the radiograph was shown here, for that cleared up the diagnosis very definitely. As to the therapeutics, it is generally admitted that little or nothing can be done. The condition is a constitutional one and there is no treatment that avails much. The fact that the weight-bearing bones were the ones usually affected might point out a line of treatment. The condition is usually symmetrical in development, but where only one limb is affected the weight might be taken off of that limb. The question of sarcoma is interesting in this connection. Most writers state that in a certain percentage of cases this condition results in sarcoma. The speaker asked Dr. Clopton just what this percentage was.

The president, referring to bone disease, said it was a singular fact that in the beginning of the condition the diagnosis was almost always rheumatism. The bone affection he had most frequently seen was osteomyelitis and in the stage of the disease where the diagnosis was difficult he had always taken into consideration the possibility of osteitis deformans. In this latter condition, however, there was no fever, while in the osteomyelitic condition there was fever and the characteristic pains. The disease seemed to affect the whole bone. Sometimes the diagnosis of the disease was an exceedingly difficult matter. Before the deformity became noticeable the only symptom was pain. The x-ray was of great value here. The speaker asked Dr. Clopton how long this condition might last.

Dr. V. P. Blair said he knew of one case in St. Louis, the patient having lived about fifteen years after the development of the disease.

Dr. Clopton said his interest in this condition had been aroused by seeing the case of Watson's, of Baltimore, which he reported in 1897. It was a typical case, such as was described by Paget. The patient's head was enormously increased in size and the posture was very characteristic. In Dr. Clopton's case the woman had trouble with this bone for twelve years, no other bones being involved, and this had led him to think it might not be a case of osteitis deformans; but in looking the matter up he found that there were cases reported in which but one or two bones were involved. In the early stages of the disease it would be practically impossible to make a diagnosis because the changes in the bones progressed very slowly. There were cases on record that had gone on for eighteen years after the time of their first observation. This was when the x-rays were not used, so that the disease must have been pretty well advanced when first noticed. The bending of the bones could not be explained by the weight bearing, because the ulna and radius when affected took on the characteristic curve, which may be due to the muscular pull on the front of the arm being greatest. Some pictures had shown the bend to be three inches in its widest part. This would seem to indicate that it would hardly be possible to relieve the condition by putting on a splint to take the weight off the affected limb. Osteosarcoma resulted in about five or six per cent. of the cases. Earlier observers were inclined to think that the giant cells found were evidence of some new growth. Some of those who had expressed such an opinion had retracted their statements about the character of the new growth and others doubtless would do so if there were occasion. This condition occurred in about two-thirds of the cases in men, while in osteomalacia 95 per cent of the patients were women. The x-ray was a most valuable aid in diagnosis. It would be an easy matter to make a differential diagnosis even though an osteomyelitis had gone on for a long time. The sequestrum

left in those cases always showed fairly well. In regard to the question of medication, the speaker said that phosphorus was no longer used. It had been shown that the bones were not low in any of the mineral salts normally found in them. Therapeutic measures gave no relief at all. Replying to a question by Dr. Blair, Dr. Clopton said that the radius did not bow outward, but backward.

Dr. Kirchner asked if the ulna also bent in those cases where the radius was bent.

Dr. Clopton replied in the affirmative.

Meeting of December 13, 1905.

TWO UNUSUAL CASES OF TUBAL PREGNANCY.

Dr. Dixon read a paper with the above title, for which see page 234.

Discussion.

Dr. Ernst Jonas considered the most remarkable thing of the paper was the double tubal pregnancy observed in the first case. So far as the stiffness of the muscles was concerned, this had been cited as one of the points of differential diagnosis between appendicitis and this condition, but at the present time that is not considered true, for any peritoneal irritation might produce muscular rigidity. In a tubal pregnancy there is no reason why there might not follow a peritoneal infection after rupture of an infected tube. This should only make the surgeon hurry the more in doing the operation for tubal pregnancy. The speaker wanted to know how often double tubal pregnancy had been observed. He recalled one case, that of a woman brought to the University Hospital with a temperature of 106, followed by a severe chill, and in a state of general pyemia. The history was not clear, but the patient said that about eight months before she had missed her menstruation for four consecutive months, and since then had had irregular bleedings. She had been examined frequently by gynecologists and a diagnosis of pelvic abscess had been made. Operation was advised, but refused. At the examination at the University Hospital a slightly enlarged uterus was found and on the left side a large mass pressing the uterus to the right side. There were certain suspicious signs which made the diagnosis of pregnancy possible, and in connection with such high temperature and the general condition led to the thought of a macerated fetus in one horn or in the left tube. However, we did not exclude the possibility of a necrotic myoma with a twisted pedicle. Operation showed an extra-uterine pregnancy, the fetus four months old and macerated. The fetus and placenta and most of the sac were removed, and the remainder of the sac was sewed into the abdominal wound. The sac sewed to the abdominal wall has loosened and the uterus is now as movable as normally.

Dr. W. C. G. Kirchner said ectopic pregnancy was not frequently met with at the City Hospital. This was possibly due to the class of cases going to the hospital. These patients most frequently had been attacked by sudden pain and often there was some bulging of the cul-de-sac. Neither could he recall any case in which the condition was on the left side. The last patient was a young colored woman who gave a clear history of pyosalpinx. The cul-de-sac was bulging and she came to the hospital ten days after the attack. The abdominal muscles were rigid and there were symptoms of peritonitis. The lower portion of the abdominal cavity was found filled with blood. Both tubes were removed and the patient recovered. He asked Dr. Dixon about the temperature record and those conditions and symptoms which aided in making the diagnosis.

Dr. Dixon, in closing, said the number of tubal pregnancies, according to Sutton, were not so rare as supposed. He also relates the occurrence of a twin tubal pregnancy, both tubes having been removed at the same time. As to the ruptured tube, the theory maintained by Dr. Blair was the commonly accepted one. The temperature in most of the cases Dr. Dixon had

seen was subnormal. One patient was so comatose that he had operated upon her without an anesthetic. He had given a hypodermoclysis of normal salt solution under each breast and left a quart of the solution in the cavity, and within two weeks she had been able to return home. The mortality was high, though he did not know the percentage. Death from rupture of the tube was not so frequent, some claimed, as was generally supposed. Although the patient might bleed until unconscious and pulseless, she rallied and often lived, an abdominal pregnancy resulting. Operation should be done as soon as the diagnosis is made. If the patients were very weak and in the hospital, it was often advised to let them recuperate, as they did not often die from the bleeding. A ruptured tubal or ovarian pregnancy was the cause of the abdominal pregnancies. The diagnosis of tubal pregnancy with rupture was comparatively easy. There was usually a history of having missed one term or more, with a continuous flow lasting ten days or more, then a sudden pain, extending into the rectum, accompanied with nausea, fainting, weak, irregular pulse and clammy skin. The difference between this and appendicitis was the missed menstrual period and the absence of temperature. The rigidity of the abdominal muscles does not cut the figure it was supposed to. He considered the second case even more interesting than the first. This patient had menstruated October 20th to the 26th, was married November 8th, and on the 23d was taken with this violent pain, with the evidence of a rupture. In this case the abdominal cavity was full of blood.

BOOK REVIEWS.

A Textbook on the Practice of Gynecology. For Practitioners and Students. By William Esterly Ashton, M. D., LL.D., Fellow of the American Gynecological Society, Professor of Gynecology in the Medico-Chirurgical College, Philadelphia, etc., etc. With 1046 illustrations. Philadelphia: W. B. Saunders & Co., 1905.

This work marks a new departure in medical textbook writing. The author takes up each procedure necessary to gynecologic work, step by step. Nothing is left to be taken for granted, the author telling the reader in every step what and how it should be done, and if the description should prove insufficient the accompanying line drawing certainly shows exactly what and how it should be done. The more than one thousand very good diagrammatic drawings give in detail the procedures and operations without obscuring their purpose by unnecessary surroundings.

In our belief this volume will be of special interest and value to the general practitioner who wishes to refresh his memory or intends to acquaint himself with modern gynecology.

Diseases of Women and Uterine Therapeutics. By H. Macnaughton-Jones. Master of Obstetrics, Royal University of Ireland; Fellow of the Royal College of Surgeons of Ireland and Edinburgh; Formerly University Professor of Midwifery and Diseases of Women and Children in the Queen's University, etc. Ninth Edition. New York: William Wood & Co., 1905.

This volume must be accorded a distinct place in gynecologic literature. It certainly does not belong to that class of rather typical textbooks, in which the author presents his subject in the form of positive statements, conveying to the student the erroneous impression that every disease has its characteristic symptoms and runs its prescribed course, or in which the writer quotes extensively from the works of others but fails to mention their names.

Macnaughton-Jones' book is the combined result of an extensive personal experience with gynecologic work, of a profound knowledge of modern literature and an intimate personal acquaintance with all the leading gynecologists of Europe and their clinics. It is probably due to this latter fact that this volume, more than any other known to us, contains so much valuable information concerning the latest operative procedures and instruments employed in the best clinics of the world. The writer's extensive quotations from recent literature, containing often the accounts of very rare conditions, must prove confusing to the student, but make this book interesting and valuable to the practitioner, especially to the gynecologic specialist. It is obvious that this ninth edition of the well-known work must be designated "up-to-date," since it contains a strikingly large number of references from the literature of 1902 and 1903. The majority of the 637 illustrations rank among the best we have ever seen.

Progressive Medicine, Vol. IV, December, 1905. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 367 pages, 41 engravings, and 5 full-page colored plates. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00. Lea Brothers & Co., Publishers, Philadelphia.

This volume contains the following articles: Genito-Urinary Diseases by Wm. T. Belfield; Diseases of the Kidney by John Rose Bradford; Therapeutics by

H. R. M. Landis; Diseases of The Digestive Tract by J. Dutton Steele; Fractures, Dislocations and Amputations by Joseph C. Bloodgood.

With this volume, Progressive Medicine completes its seventh year of publication. The work has from its inception embodied an earnest effort to present a contemporary record of the best that is being thought and done in medicine, both from a scientific and a practical standpoint.

A Compend of Medical Latin. Designed expressly for Elementary Training of Medical Students. By W. T. St. Clair, A. M. Second Edition, revised. Philadelphia: P. Blakiston's Son & Co., 1904.

This little volume, published in the quiz-compend series, is a most valuable and timely publication. It is a brief but none the less thorough exposition of Elementary Latin Grammar, with particular application to forms employed in Medical Latin, and using in its examples the vocabulary of medicine.

The International Medical Annual. A Year Book of Treatment and Practitioners' Index. 1905. Twenty-third year. Treat & Co., New York, 1905. Price $3.

This volume gives in an alphabetical arrangement brief synopses of the advances in Materia Medica and Therapeutics, and in methods of treatment. It is provided with a number of good plates and diagrams

A Textbook of Clinical Diagnosis by Laboratory Methods. By L. Napoleon Boston, A. M., M. D. Second Edition. W. B. Saunders & Co., Philadelphia and London, 1905.

The first edition of this work appeared last year and was then reviewed in some detail in these columns. Now, eight months later, a second edition has been issued. But slight changes have been made. At the end some seventeen pages of new matter have been added, covering the more important advances. The book is clearly written and well illustrated. The more elementary laboratory procedures are well described, rendering the volume a useful one to put into the hands of students. The more advanced laboratory worker will find other books more to his mind.

The Diagnostics of Internal Medicine. By G. R. Butler, Sc. D., M. D. Second Edition. D. Appleton & Co., New York and London, 1905.

The writer has divided his book into two main portions: The first half contains a description of the various signs and symptoms met with in clinical work, together with an analysis of their diagnostic significance; the second part is devoted to the pathologic conditions themselves particularly from the point of view of their diagnosis. The volume which is handsomely gotten up and beautifully illustrated seems especially suited to the needs of the recent graduate who will here find many a hint to aid him in his diagnostic work. The medical student too will find the volume useful.

Nothnagel's Practice. American Edition. Diseases of the Kidneys and of the Spleen, and Hemorrhagic Diseases. By Dr. H. Senator and Dr. M. Litten. Edited with additions by James B. Herrick. Authorized translation from the German under the editorial supervision of Alfred Stengel. W. B. Saunders & Co., Philadelphia and London, 1905.

Senator is known for his logical reasoning, his systematic arrangements of facts, his conservatism and his profound knowledge of those subjects upon which he lectures. In his work on diseases of the kidney he has combined all of this with a most careful review of the literature on the subject and has thus gotten

together probably the most concise and complete work ever written on diseases of the kidney. The general portion of the work is especially commendable, in which he devotes a chapter to each of the following subjects: Albuminura, Mucinuria, Urinary tube casts, Hæmaturia, Hœmoglobinuria, Lipuria, Oxaluria, Phosphaturia, Dropsy and Uraemia. These subjects are handled in a masterful way and all that is definitely known concerning them is presented here in his characteristic style. The special portion, in which the individual diseases are considered, shows the results of years of personal experience in diseases of the kidney.

The second half of the work is devoted to diseases of the Spleen and Hemorrhagic diseases by Dr. M. Litten. Some 330 pages are devoted to a careful consideration of a subject altogether too little understood by the majority of physicians. The chapters on the Leukaemias are worthy of special mention and careful perusal. Under Hemorrhagic diseases the author treats of Scurvy, Infantile Scurvy, Hemophilia and Morbus Maculosus Werlhofii.

THE SURGICAL DISEASES OF THE GENITO-URINARY TRACT, VENEREAL AND SEXUAL DISEASES. A textbook for Students and Practitioners. By G. Frank Lydston, M. D., Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Medical Department of the State University of Illinois (the College of Physicians and Surgeons). Second Revised Edition. Illustrated with 233 Engravings and 7 Colored Plates. 6½x9¾ inches. Pages xv. 1008. Extra Cloth, $5.00 net. Sheep or Half-russia, $6.00 net. F. A. Davis Company, Publishers, 1914-16 Cherry St., Philadelphia.

The thorough manner in which the author considers his subjects is only equaled by the attractiveness of his style of writing. The arrangement of the book is most clear and excellent. Dr. Lydston has incorporated in the work not only the results of his wide experience in actual practice, but also all of importance that could be gleaned from the writings of others.

NEW METHODS OF TREATMENT. By Dr. Laumonier. Translated by H. W. Syers, M. A., M. D. Chicago: W. T. Keener & Co., 1904.

Laumonier's book is entertainingly written and is especially interesting as representing a typical French point of view in Therapeusis. Much space is devoted to a discussion of the Cacodylates and other drugs towards which the French seem especially to incline, whereas little is said of the multitude of new German synthetic products and the hygienic, dietetic and balneologic methods of treatment are hardly even mentioned. The volume is disfigured by a number of errors, as for instance, on p. 181, where a formula is given containing only half as much bromide of strontium as was apparently intended. There is an adequate index.

METHODS OF MORBID HISTOLOGY AND CLINICAL PATHOLOGY. By T. Walker Hall and G. Herxheimer. 1905, J. B. Lippincott Co., Philadelphia.

Inscribed to the memory of Carl Weigert, the teacher of one of the authors, who is himself a well-known and reputed microscopist, this book appeals a priori to the mind of workers that know what thorough and classic results the Weigert school has obtained. But even if this sentiment, or prejudice, should not obtain, it must appeal to everyone occupied with histologic and pathologic studies. Although the authors, in their preface announce that the book is intended for students and pathologists, the reviewer does not know whether the student would not do just as well with one of the well known compends. But no pathologist should miss this work, not because he is constantly called upon to consider the chemical and physical ratios of the methods discussed, as the remarks are too short and incomplete for this, but because he finds in this

book a great number of methods not published in the other compends and nevertheless of very great importance; they are otherwise accessible only by resorting to the original articles. The different procedures that Herxheimer himself has worked out for the demonstration of the finer structure of epithelial cells we find here collected, and in the same way others that have not yet reached the lethargy of the textbook-like methods of the other books on the subject, not even excepting that of Schmorl. We say this to invite the attention of pathologists to this book, while we do not want to say that it is one of the best works on the subject for the student also.

Ueber die Traumatische Entstehung innerer Krankheiten. Von Dr. Hans Klatt, Wurzburger-Abhandlungen aus dem Gesamtgebiet der praktischen Medizin. A. Stuber's Verlag (C. Kabitzsch). Wurzburg, 1905.

The little monograph discusses entertainingly the traumatic production of internal diseases. As is well known a local tuberculosis may follow trauma; a latent syphilis may manifest itself at the sight of an injury; the connection between injury and cancer is often close; diabetes, gout, leucemia and many other diseases have seemed to follow a trauma. The writer lays especial stress upon the connection between injury and many nervous diseases. The booklet will be read with interest. A number of misprints, however, disfigure its pages and the absence of an index diminishes its value.

Medical Jurisprudence. A Manual for Students and the Practitioner. By Edwin Welles Dwight. The Medical Epitome Series. Edited by V. E. Petersen. Lea Bros. & Co., Philadelphia and New York.

This little book, like its companions, can be recommended for the purpose of quick orientation on data in medical jurisprudence. Necessarily the statements are short and presuppose a certain knowledge of the subject that a student cannot possess. It will be a useful guide for the practitioner, not for the student.

Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., President of the State Commission in Lunacy, New York; Clinical Professor of Neurology and Psychiatry, Columbia University. Fifth Edition, revised and enlarged. Octavo volume of 937 pages, with 341 illustrations. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $5.00 net; Half Morocco, $6.00 net.

Inasmuch as this book has been written as a text-book for the student and the general practitioner it should be criticised only from this point of view. That part devoted to Psychiatry can not be said to satisfy the demand which a student or practitioner might well make of a book of this kind. Certainly the scholarly discussion by A. Myer on the present problems of Psychiatry is fairly heavy food for a student to digest. Whatever else a student needs in a text-book it certainly is not discussion and it certainly is presentation of clinical facts. There is no subject which can be made more attractive to a student than mental diseases and no subject which unfortunately is made less so to him and the reason is that text-books, and teachers for that matter, insist upon dwelling on the difficulties in the classification of the subject rather than upon the insane individual. This is the vital thing to the student and a writer of a text-book meant for the student ought to appreciate this fact. The neurological part of the book is well presented though the omission of a great deal of the later work on multiple sclerosis and Tic, to name only two examples, might be altered in the next edition. That the book has gone through so many editions shows that it meets a certain want and there must be something in it that appeals to

the student for whose needs it is written. There is no reason as far as the writer of this review can see, why a text-book written for students and the general practitioner should not present the subject as accurately and as carefully and with all there is to be known as if this same book were to be read by the specialist.

ANATOMISCHER ATLAS IN STEREOSKOPISCHEN RÖNTGENBILDERN. By Dr. Ernst Sommer. Wurzburg: A. Stuber. 1906. 10 marks.

The normal anatomy of the bones and joints is illustrated in this work by 20 anatomical plates. A diagram is placed at the top of the plate, on which is indicated the anatomical description of the special region to be described. Below this is placed a stereoptican skiagraph, which cleary shows the normal structure and appearance of the bones and articulations.

This work is not only of great value to the anatomist, but is equally valuable to the surgeon and radiologist.

RELATION OF DISEASES OF THE SKIN TO INTERNAL DISORDERS, with Observations on Diet, Hygiene and General Therapeutics, by L. Duncan Buckley, A. M., M. D. Rebman Co., London and New York.

Dr. Bulkley's life work has been more or less along this line, namely, the subject of general medicine to diseases of the skin, and a book from him on this subject is of great value. This little volume consists of 175 pages and is compiled from lectures delivered at the New York Skin and Cancer Hospital.

MANUEL ELEMENTAIRE DE DERMATOLOGIE TOPOGRAPHIQUE RÉGIONALE, by R. Sabouraud. Masson and Co., publishers, Paris, 1905.

Sabouraud, who is one of the leading French dermatologists, gives in this volume a concise but complete description of the various diseases of the skin which affect the different regions of the body. This arrangement renders it very convenient for reference. For instance, his first chapter comprises those diseases which affect the face and head, and as the illustrations are numerous and excellent, an obscure case can be readily classified by the student or the general practitioner upon close perusal of the text by referring to the region affected. The book shows throughout an immense amount of work, as it is far more difficult to arrange a book in this manner than in the usual one, cross references being constantly necessary. It is to be hoped that some one will translate this valuable volume into English as it would be of great assistance to the profession at large.

TREATISE ON DISEASES OF THE SKIN FOR THE USE OF ADVANCED STUDENTS AND PRACTITIONERS, by Henry W. Stelwagon, M. D., Ph. D. Fourth edition, thoroughly revised, with 258 illustrations in the text and 32 full page lithographic half-tone plates. W. B. Saunders. 1905. Philadelphia and London.

The popularity of this book is indicated by its fourth edition. In this edition the writer has brought chapters upon the Roentgen rays, high frequency currents and the various light treatments up to date and many of the chapters upon other subjects have been retouched or replaced by new ones. The literature especially has been brought up to date by foot notes, thus increasing the value of the work in various ways.

A MANUAL OF THE DISEASES OF INFANTS AND CHILDREN. By John Ruhrah, M. D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Pp. 404. Philadelphia: W. B. Saunders & Co., 1905.

This manual has been designed for the use of the medical student, as a volume of ready reference. Following the classifications as seen in the larger

text books, the author has summarized existing knowledge on the various subjects, relying both on the literature as well as on his own varied knowledge in his presentations. The danger, always present in books of this sort, that clearness will be sacrificed to conciseness would appear to have been almost wholly eliminated. The chapter on infant feeding is remarkably complete. One feature of value is the insertion of references to the literature, this being supplemented by a short chapter on the methods of looking up such references. As a whole, the book is a distinctively valuable contribution, which will be appreciated not only by the student, but also by the physician desiring a volume of ready reference on Pediatrics.

BABY INCUBATORS. A Clinical Study of the Premature Infant with Special Reference to Incubator Institutions Conducted for Show Purposes. By John Zahorsky, M. D., Clinical Professor of Pediatrics, Medical Department, Washington University, St. Louis. Courier of Medicine Co., St. Louis, 1905.

This little book is an elaboration of a series of articles on the subject of premature infants, detailing the author's experiences with the incubator institute at the World's Fair in St. Louis. In connection with question of public incubators, the author discusses with much wealth of detail, the problems of the raising of premature infants, with full consideration of apparatus, methods, etc. The book is a valuable addition to the literature of the subject. It is well supplied with charts, tables and illustrations.

LEHRBUCH DER SAUGLINGSKRANKHEITEN, von. Dr. Med. et Phil. Heinrich Finkelstein. Privatdocent und Oberarzt am Wainehaus und am Kinderasyl der Stadt Berlin. Vol. I. Berlin, Fischer's Medicin. Buchhandlung H. Kornfeld, 1905. New York: G. E. Stechert & Co., $2.50.

This book is one of the most important contributions to pediatric literature of recent years. Dr. Finkelstein takes rank as one of the first pediatrists of Germany, and his book embodies the results of his own exhaustive studies of the diseases of infancy, based upon a literally enormous clinical experience. Added to this are the critical analyses of the literature on the various subjects, with full literary references. The chapter on hygiene and development for instance is really a cyclopedic article, with the facts stated in a clear scientific style, which makes its reading delightfully pleasant as well as profitable. The diseases of the newly born are considered in detail, so too the general systemic infections, sepsis, hemorrhagic diseases, syphilis and tuberculosis. The last chapter of this volume is devoted to a thorough discussion of the diseases of the central nervous system in infancy.

To those who read German, this book will be invaluable as a standard reference work on the diseases of infancy, and the work is sure to receive in other countries the same enthusiastic reception that has been accorded it in Germany.

THE PRINCIPLES OF BACTERIOLOGY. A practical Manual for Students and Physicians. H. A. C. Abbott. 7th Edition. 1905. Lea Brothers & Co., Philadelphia and New York.

The new edition of this well known and appreciated book is changed in comparison to the older editions by the addition of the results of the latest bacteriologic work. An addition, too, is the treatise on infection or immunity, that is easy sailing to the initiated person, but will offer great difficulties to the student coming fresh into the subject. A more elementary representation of the subject and a smaller number of details would have served the purpose easier and with the same effect. For the reader who is not a specialist, this is probably about all he can acquire about the problems dealt with. This is not said as a detriment to the book, but as a point that does not fit in the otherwise clear and lucid way of demonstration used in it.